```
=> fil wpix
FILE 'WPIX' ENTERED AT 15:15:46 ON 10 JAN 2008
COPYRIGHT (C) 2008 THE THOMSON CORPORATION

FILE LAST UPDATED:                          7 JAN 2008    <20080107/UP>
MOST RECENT THOMSON SCIENTIFIC UPDATE:      200802        <200802/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> IPC Reform backfile reclassification has been loaded to September 6th
    2007. No update date (UP) has been created for the reclassified
    documents, but they can be identified by 20060101/UPIC and
    20061231/UPIC, 20070601/UPIC and 20071001/UPIC. <<<


FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,
PLEASE VISIT:
http://www.stn-international.de/training_center/patents/stn_guide.pdf

FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE
http://scientific.thomson.com/support/patents/coverage/latestupdates/

EXPLORE DERWENT WORLD PATENTS INDEX IN STN ANAVIST, VERSION 2.0:
http://www.stn-international.com/archive/presentations/DWPIAnaVist2_0710.p
df

 >>> XML document distribution format now available.
                                          See HELP XMLDOC <<<

=> d his nofile

     (FILE 'HOME' ENTERED AT 14:40:29 ON 10 JAN 2008)

     FILE 'HCAPLUS' ENTERED AT 14:40:39 ON 10 JAN 2008
L1            1 SEA ABB=ON  PLU=ON  US2007077460/PN
                SEL RN

     FILE 'REGISTRY' ENTERED AT 14:41:11 ON 10 JAN 2008
L2            7 SEA ABB=ON  PLU=ON  (7440-05-3/BI OR 7440-06-4/BI OR
                7440-44-0/BI OR 7782-42-5/BI OR 785785-69-5/BI OR
                785785-70-8/BI OR 785808-93-7/BI)
                D SCA

     FILE 'WPIX' ENTERED AT 14:43:11 ON 10 JAN 2008
L3            1 SEA ABB=ON  PLU=ON  US20070077460/PN
                D IFULL

     FILE 'HCAPLUS' ENTERED AT 14:48:29 ON 10 JAN 2008
L4        49195 SEA ABB=ON  PLU=ON  (C OR CARBON)(3A)(FILM? OR THINFILM?)
L5              QUE ABB=ON  PLU=ON  PORO? OR PORE OR VOID# OR HOLE# OR
                PERVIOUS
L6          600 SEA ABB=ON  PLU=ON  L4(3A)L5
L7              QUE ABB=ON  PLU=ON  PARTICLE? OR MICROPARTICL? OR          Formatted: French (France)
                PARTICULAT?
L8           61 SEA ABB=ON  PLU=ON  L6 AND L7
L9              QUE ABB=ON  PLU=ON  DISPERS?                               Formatted: French (France)
L10             QUE ABB=ON  PLU=ON  DISTRIBUT? OR INTERSPERS? OR
                SCATTER? RO SPREAD?
L11          21 SEA ABB=ON  PLU=ON  L8 AND (L9 OR L10)
L12          12 SEA ABB=ON  PLU=ON  L11 AND L9
```

```
L13      212447 SEA ABB=ON  PLU=ON  (L9 OR L10)(S)L7
L14          16 SEA ABB=ON  PLU=ON  L11 AND L13
L15          14 SEA ABB=ON  PLU=ON  L14 AND (PY<=2004 OR PRY<=2004 OR
                AY<=2004)

     FILE 'WPIX' ENTERED AT 15:05:15 ON 10 JAN 2008
L16          59 SEA ABB=ON  PLU=ON  L6 AND L7
L17          13 SEA ABB=ON  PLU=ON  L16 AND L13
L18             QUE ABB=ON  PLU=ON  PT OR PLATINUM
L19           2 SEA ABB=ON  PLU=ON  L17 AND L18
L20          11 SEA ABB=ON  PLU=ON  (L17 OR L19) AND (PY<=2004 OR
                PRY<=2004 OR AY<=2004)

     FILE 'HCAPLUS' ENTERED AT 15:08:43 ON 10 JAN 2008
L21           5 SEA ABB=ON  PLU=ON  L15 AND L18
L22          14 SEA ABB=ON  PLU=ON  L15 OR L21

     FILE 'COMPENDEX' ENTERED AT 15:09:27 ON 10 JAN 2008
L23          18 SEA ABB=ON  PLU=ON  L6 AND L7
L24           7 SEA ABB=ON  PLU=ON  L23 AND L13
L25           2 SEA ABB=ON  PLU=ON  L24 AND L18
L26           6 SEA ABB=ON  PLU=ON  (L24 OR L25) AND PY<=2004

     FILE 'JAPIO' ENTERED AT 15:12:30 ON 10 JAN 2008
L27          12 SEA ABB=ON  PLU=ON  L6 AND L7
L28           5 SEA ABB=ON  PLU=ON  L27 AND L13
L29           1 SEA ABB=ON  PLU=ON  L28 AND L18
L30           3 SEA ABB=ON  PLU=ON  (L28 OR L29) AND PY<=2004

     FILE 'INSPEC' ENTERED AT 15:13:27 ON 10 JAN 2008
L31          25 SEA ABB=ON  PLU=ON  L6 AND L7
L32           3 SEA ABB=ON  PLU=ON  L31 AND L13
L33           0 SEA ABB=ON  PLU=ON  L32 AND L18

     FILE 'WPIX' ENTERED AT 15:14:09 ON 10 JAN 2008
                SEL L20 PN,AP

     FILE 'HCAPLUS' ENTERED AT 15:14:28 ON 10 JAN 2008
L34          15 SEA ABB=ON  PLU=ON  (EP1995-114048/AP OR WO1991-JP882/AP

L35          12 SEA ABB=ON  PLU=ON  L22 NOT L34

     FILE 'HCAPLUS, COMPENDEX, JAPIO, INSPEC' ENTERED AT 15:15:03 ON 10
     JAN 2008
L36          20 DUP REM L35 L26 L30 L32 (4 DUPLICATES REMOVED)


=> d l20 ifull 1-11

L20  ANSWER 1 OF 11  WPIX COPYRIGHT 2008       THE THOMSON CORP on STN
ACCESSION NUMBER:     2006-129293 [14]   WPIX
DOC. NO. CPI:         C2006-045046 [14]
TITLE:                Composition for forming porous
                      carbon film, contains polyimide
                      obtained by dehydration ring closure of polyamic
                      acid obtained by reacting diamine and
                      tetracarboxylic acid anhydride, organic
                      particles and solvent medium
DERWENT CLASS:        A14; A26; A32; E13; E36
INVENTOR:             KAWAGUCHI K; MATSUKI Y
```

PATENT ASSIGNEE: (JAPS-C) JSR CORP
COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
JP 2006028317	A	20060202	(200614)*	JA	10[0]	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 2006028317 A		JP 2004-208052	20040715

PRIORITY APPLN. INFO: **JP 2004-208052 20040715**
INT. PATENT CLASSIF.:
IPC ORIGINAL: C01B0031-00 [I,C]; C01B0031-02 [I,A]; C08K0005-00 [I,C]; C08K0005-151 [I,A]; C08K0005-3415 [I,A]; C08L0027-00 [I,C]; C08L0027-12 [I,A]; C08L0079-00 [I,C]; C08L0079-08 [I,A]

BASIC ABSTRACT:

JP 2006028317 A UPAB: 20060227

NOVELTY - A composition contains a polymer (A) chosen from polyimide and polyamic acid, fluorine atom-containing organic **particles** (B) and a medium (C) chosen from N-alkyl-2-pyrrolidone, lactone and dialkyl imidazolidinone. The polyimide is obtained by dehydration ring closure of polyamic acid obtained by reacting a diamine compound and tetracarboxylic acid anhydride.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for formation of **porous carbon film** which involves forming a coating film of above composition on a substrate or into a container, heating the coating film in oxidation atmosphere, peeling the film from the substrate or the container, and again heating the coating film under inert atmosphere or in vacuum.

USE - For formation of **porous carbon film** (claimed).

ADVANTAGE - The composition enables formation of **porous carbon film** having uniform **pore** size.

EXTENSION ABSTRACT:

EXAMPLE - (In g) Pyromellitic dianhydride (50) and 4,4'-diamino diphenyl ether (46) were dissolved in N-methyl-2-pyrrolidone (240), and reacted at room temperature for 6 hours. A polyamic acid solution (336) having intrinsic viscosity of 1.21 dl/g and polyamic acid content of 27 mass% was obtained. A **dispersion** liquid (72) containing 40 mass% of polytetrafluoroethylene **particles** having diameter of 0.3 microns **dispersed** in N-methyl-2-pyrrolidone, was added to the polyamic acid solution. The mixture was stirred at room temperature for 3 hours to form film-forming composition. - The composition was applied on Teflon and heated to 150degreesC for 15 hours under atmospheric pressure. The obtained film was further heated to 800degreesC for 10 hours in nitrogen atmosphere to form a **porous carbon film** having thickness of 500 microns. Elemental analysis of the porous film showed presence of 95.5% carbon, 0.5% hydrogen, 0.3% oxygen and 3% nitrogen. The porous film was found to have uniform pore size and bending strength of 100 MPa according to JIS K6911.

FILE SEGMENT: CPI
MANUAL CODE: CPI: A04-E10; A05-J01A; A10-E05B; A11-A02A; A11-B04; E07-A02C; E07-A02G; E07-A03C; E07-D03; E07-D09D; E31-N03D

L20 ANSWER 2 OF 11

ACCESSION NUMBER: 2005-494981 [50] WPIX
DOC. NO. CPI: C2005-150559 [50]
DOC. NO. NON-CPI: N2005-403535 [50]
TITLE: Infrared-ray absorption film for infrared-ray sensor used in detecting infrared-rays, uses porous material, preferably carbon or meso-porous material
DERWENT CLASS: L03; S03; T04; U14
INVENTOR: ITOH T; ITO T
PATENT ASSIGNEE: (ITOH-I) ITOH T; (NPDE-C) NIPPONDENSO CO LTD; (NPDE-C) DENSO CORP
COUNTRY COUNT: 2

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
US 20050133722	A1	20050623	(200550)*	EN	4[2]	
JP 2005175069	A	20050630	(200550)	JA	6	
US 7183551	B2	20070227	(200718)	EN		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 20050133722	A1	US 2004-8804	20041209
JP 2005175069	A	JP 2003-410372	20031209

PRIORITY APPLN. INFO: JP 2003-410372 20031209
INT. PATENT CLASSIF.:
IPC ORIGINAL: G01J0005-00 [I,A]; G01J0005-00 [I,C]
IPC RECLASSIF.: G01J0001-02 [I,A]; G01J0001-02 [I,C]; H01L0027-14 [I,A]; H01L0027-14 [I,C]; H01L0037-00 [I,A]; H01L0037-00 [I,C]

BASIC ABSTRACT:
US 20050133722 A1 UPAB: 20051223
NOVELTY - An infrared-ray absorption film uses porous material, preferably carbon or meso-porous material.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method for producing infrared-ray absorption film comprising applying a porous material precursor solution onto substrate; and conducting sintering.
USE - Used for infrared-ray sensor (claimed) used in detecting infrared-rays.
ADVANTAGE - Acquired through an economical process, e.g. ink jet printing, by printing and sintering porous material solution without using vacuum process, and has low reflection factor and high absorption ratio equivalent to those of gold black. DESCRIPTION OF DRAWINGS - The figure shows a schematic view of **carbon porous** material **film**.
Carbon **particles** (2)
Pores (3)
Carbon matrix (4)

TECHNOLOGY FOCUS:
ELECTRONICS - Preferred Properties: The pore (3) size of the porous material is hundreds of nm to several microns. The porous material precursor solution is a solution prepared by **dispersing** carbon **particles** (2) and resin **particles** in a **dispersion** medium containing a meso-porous skeletal material, a surface active agent, and water. The mesoporous skeletal material is metal alkoxide. Preferred Methods: Application is ink jet printing.

FILE SEGMENT: CPI; EPI

MANUAL CODE: CPI: L04-E05C
EPI: S03-A03; T04-G02J; U14-E01A; U14-E01B; U14-E01C

L20 ANSWER 3 OF 11 WPIX COPYRIGHT 2008 THE THOMSON CORP on STN
ACCESSION NUMBER: 2005-335300 [35] WPIX
DOC. NO. CPI: C2005-104148 [35]
DOC. NO. NON-CPI: N2005-274223 [35]
TITLE: Functional porous film useful in sensor e.g. carbon dioxide sensor comprises porous body having pore and functional portion disposed in pore and having different function from porous body
DERWENT CLASS: E36; J04; L03; P53; S03
INVENTOR: EGASHIRA M; HYODO T; ONO S; SHIMIZU Y
PATENT ASSIGNEE: (DENK-C) TDK CORP
COUNTRY COUNT: 37

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
EP 1528613	A1	20050504	(200535)*	EN	43[21]	
JP 2005132644	A	20050526	(200535)	JA	20	
JP 2005133114	A	20050526	(200535)	JA	16	
US 20050109617	A1	20050526	(200535)	EN		
CN 1611349	A	20050504	(200558)	ZH		
KR 2005040714	A	20050503	(200637)	KO		

Formatted: French (France)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 1528613	A1	EP 2004-25548	20041027
JP 2005132644	A	JP 2003-367759	20031028
JP 2005133114	A	JP 2003-367760	20031028
KR 2005040714	A	KR 2004-83672	20041019
US 20050109617	A1	US 2004-972561	20041026
CN 1611349	A	CN 2004-10086983	20041027

PRIORITY APPLN. INFO: JP 2003-367759 20031028
JP 2003-367760 20031028
INT. PATENT CLASSIF.:
MAIN: B22F003-11
IPC RECLASSIF.: B22F0003-11 [I,A]; B22F0003-11 [I,A]; B22F0003-11 [I,C]; B22F0003-11 [I,C]; B22F0007-02 [I,C]; B22F0007-04 [I,A]; C04B0038-06 [I,A]; C04B0038-06 [I,C]; C22C0001-08 [I,A]; C22C0001-08 [I,C]; G01N0027-02 [I,A]; G01N0027-02 [I,C]; G01N0027-04 [I,A]; G01N0027-04 [I,C]; G01N0027-12 [I,A]; G01N0027-12 [I,C]; G01N0027-22 [I,A]; G01N0027-22 [I,C]; G01N0027-406 [I,A]; G01N0027-406 [I,C]; G01N0027-407 [I,A]; G01N0027-407 [I,C]; G01N0027-409 [I,A]; G01N0027-409 [I,C]; G01N0027-41 [I,A]; G01N0027-41 [I,C]; G01N0027-416 [I,A]; G01N0027-416 [I,C]; G01N0027-49 [I,A]; G01N0027-49 [I,C]; H01M0004-86 [I,A]; H01M0004-86 [I,C];

H01M0004-88 [I,A]; H01M0004-88 [I,C]

BASIC ABSTRACT:

EP 1528613 A1 UPAB: 20051222

NOVELTY - A functional porous film (10) comprises a porous body (11) having a pore (11A) and a structure in which several **particles** (11B) are connected to one another, and a functional portion (12) **dispersed** in **particle** form and having a different function from the porous body.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following: (1) manufacturing functional porous film involving forming a precursor film including a spherical pore-forming powder (e.g. resin powder) on which a material of functional portion is deposited and a material powder of the porous body, and heating the precursor film to remove the pore-forming powder and sinter the material powder of the porous body; and (2) manufacturing a sensor.

USE - In a sensor (claimed) such as carbon dioxide sensor, hydrogen sensor, carbon monoxide sensor, nitrogen oxide sensor, humidity sensor, pH sensor and ion sensor.

ADVANTAGE - The size or shape of the pore can be controlled with high precision by organic powder. Therefore, the porosity and specific surface area can be increased and the uniformity of the size and shape of the pore can be improved. The downsizing of sensor device can be achieved and the performance can be improved. The response speed and the recovery speed of the sensor can be improved.

DESCRIPTION OF DRAWINGS - The figure shows a sectional view of the functional porous film.

functional porous film (10) porous body (11)

pore (11A)

particles (11B)

functional portion. (12)

FILE SEGMENT: CPI; GMPI; EPI

MANUAL CODE: CPI: E11-Q03J; E31-A03; E31-A05; E31-H05; E31-N05B; E31-N05C; J04-C02A; J04-C04A; L03-E05C
EPI: S03-E03C

L20 ANSWER 4 OF 11 WPIX COPYRIGHT 2008 THE THOMSON CORP on STN

ACCESSION NUMBER: 2004-775998 [76] WPIX

DOC. NO. CPI: C2004-271767 [76]

DOC. NO. NON-CPI: N2004-611283 [76]

TITLE: Metal-supported **porous carbon film** for electrode of fuel cell comprises fine metal **particles** with specified mean **particle** diameter **dispersed** and supported on pore surface walls

DERWENT CLASS: L03; X16

INVENTOR: FUJII Y; MATSUO M; OHYA S; OYA N; TAKAGI; TAKAGI J

PATENT ASSIGNEE: (UBEI-C) UBE IND LTD; (FUJI-I) FUJII Y; (MATS-I) MATSUO M; (OHYA-I) OHYA S; (TAKA-I) TAKAGI J

COUNTRY COUNT: 106

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2004095614 <--	A2	20041104	(200476)*	EN	27[8]	
JP 2004335459 <--	A	20041125	(200477)	JA	13	
US 20070077460	A1	20070405	(200726)	EN		

APPLICATION DETAILS:

PGPub of 10/550,902

PATENT NO	KIND	APPLICATION	DATE
WO 2004095614 A2 20040408		**WO 2004-JP5092**	
JP 2004335459 A 20040416		**JP 2004-121247**	
US 20070077460 A1 20040408		**WO 2004-JP5092**	
US 20070077460 A1		US 2005-550902	20050928

PRIORITY APPLN. INFO: **JP 2003-113978 20030418**
INT. PATENT CLASSIF.:
IPC ORIGINAL: B01J0021-00 [I,C]; B01J0021-18 [I,A]; H01M0004-00 [I,A]; H01M0004-00 [I,C]; H01M0008-00 [I,A]; H01M0008-00 [I,C]
IPC RECLASSIF.: C01B0031-00 [I,C]; C01B0031-02 [I,A]; H01M0004-86 [I,A]; H01M0004-86 [I,A]; H01M0004-86 [I,C]; H01M0004-86 [I,C]; H01M0004-88 [I,A]; H01M0004-88 [I,A]; H01M0004-88 [I,C]; H01M0004-88 [I,C]; H01M0004-90 [I,C]; H01M0004-90 [I,C]; H01M0004-92 [I,A]; H01M0004-92 [I,A]; H01M0008-10 [I,A]; H01M0008-10 [I,A]; H01M0008-10 [I,C]; H01M0008-10 [I,C]

BASIC ABSTRACT:
WO 2004095614 A2 UPAB: 20060122
NOVELTY - Metal-supported **porous carbon film** comprises fine metal **particles** with a mean **particle** diameter of 0.7-20 nm **dispersed** and supported on pore surface walls. The fine metal **particles** are produced by chemical reduction of metal compound with a reducing agent using a catalyst on the pore surfaces of the **porous carbon film**. About 15 - 95 % of the metal fine **particles** consist of multiply twinned **particles**.
USE - For electrode and membrane-electrode assembly of fuel cell (claimed).
ADVANTAGE - It is possible to easily support metal fine **particles** by employing only a very gentle stirring procedure. The growth of the metal fine **particles** is in the form of epitaxial growth, and the resulting metal fine **particles** have very high crystallinity while the **particles** are also physicochemically stable, thereby allowing the fine metal **particles** to be finely **dispersed** and supported on the pore walls in a uniform manner. Precipitation of the metal fine **particles** occurs simultaneously across the whole surface without a location-dependent time lag, and the **particle** sizes of the metal fine **particles** in the support are monodispersively arranged, with the **particle** sizes freely controlled on the nanoscale. Multiply twinned **particles** have **particle** surfaces composed of highly surface active, high-density crystal faces and, because of their shape stability which allows them to maintain their initial structure for long periods, enables to obtain a stably operating fuel cell with overall enhanced properties. It is possible to obtain the metal-supported **porous carbon film** where the support structure is such that metal fine **particles** having a controlled **particle** size are uniformly supported to allow effective utilization of the metal-based catalyst, and the fabrication steps are simple. TECHNOLOGY FOCUS:
METALLURGY - The metal fine **particles** are composed mainly of **platinum**. The catalyst is a palladium compound supported on a carbon film.
FILE SEGMENT: CPI; EPI
MANUAL CODE: CPI: L03-E04B
EPI: X16-E06

L20 ANSWER 5 OF 11 WPIX COPYRIGHT 2008 THE THOMSON CORP on STN
ACCESSION NUMBER: 2004-607473 [59] WPIX
DOC. NO. CPI: C2004-220132 [59]

TITLE: Coated textile for clothes, comprises resin layer containing polyurethane resin(s) formed on fiber textile, and has preset moisture permeability and waterproofness
DERWENT CLASS: A14; A25; A87; E12; F06
INVENTOR: FURUYA T; OCHI S
PATENT ASSIGNEE: (TOYM-C) TOYOBO KK
COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
JP 2004232099 <--	A	20040819	(200459)*	JA	7[0]	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 2004232099 A		JP 2003-19374	20030128

PRIORITY APPLN. INFO: **JP 2003-19374 20030128**
INT. PATENT CLASSIF.:
IPC RECLASSIF.: D06M0015-21 [I,C]; D06M0015-31 [I,A]; D06M0015-37 [I,C]; D06M0015-564 [I,A]

BASIC ABSTRACT:
JP 2004232099 A UPAB: 20050531
NOVELTY - A coated textile comprises a resin layer containing polyurethane resin(s) formed on the fiber textile. The textile has moisture permeability of 15000 g/m2.24 hours or more by potassium acetate method and waterproofness of 5000 mmH2O or more.
DETAILED DESCRIPTION - The highest attainment temperature and highest attainment humidity in clothes measured by perspiration simulation apparatus are 35 degrees C or less and 80 % RH or less, respectively.
USE - For clothes, knitted fabric and non-woven fabric.
ADVANTAGE - The coated textile has high water-proof capacity and high degree moisture permeability. The textile provides clothes with comfortable feeling of wear. The temperature and humidity of clothes are maintained favorably even during perspiration. TECHNOLOGY FOCUS:
TEXTILES AND PAPER - Preferred Textile: The coated textile contains organic **microparticles** having 1 mmol/g or more of salt type carboxyl groups. The **microparticles** contains cross-linked structure obtained by chemical alteration of nitrile group in acrylonitrile group polymer containing 50 weight% or more of acrylonitrile by hydrazine, divinylbenzene or triaryl isocyanurate. The salt type carboxyl group is introduced to the cross-linked structure by hydrolysis. Water-repellent processing is performed to the fiber textile before coating resin layer.
POLYMERS - Preferred Resin: The resin layer comprises two or more types of polyurethane resin having different solidification value. The solidification value of each polyurethane resin is in the range of 5-12. The difference between the solidification values of polyurethane resin is 0.5 or more.
EXTENSION ABSTRACT:
EXAMPLE - Hydrazine and raw material **microparticle** water **dispersion** containing (in parts weight) acrylonitrile (450), methyl acrylate (40), p-styrene sulfonic acid soda (16) and water (118) were cross-linked and hydrolyzed in sodium hydroxide, to obtain moisture absorptive and releasing organic **microparticles** of mean **particle** diameter of 0.5 micrometers and swelling

degree of 80 %. Ester group polyurethane resin (75), ether group polyurethane resin (35), N,N'-dimethylformamide (20), organic **microparticles** (10) and Coronate HL (TM) (3) were mixed, to obtain urethane resin solution. A nylon textile fabric was subjected to refinement, dyeing, water-repellent processing and drying. The resin solution was coated on fabric, and was induced to 15 degrees C water. Solidification was carried out for 3 minutes, and the fabric was dried at 130 degrees C. A resin **porous film** of thickness 70 micrometers was formed. The coated textile had waterproofness of 10000 mmH2O, moisture permeability of 16000 g/m2.24 hours, dew formation amount of 5 g/m2 and friction coefficient of 0.3. The temperature and humidity in the clothes were 33 degrees C and 57 % RH, respectively.

FILE SEGMENT: CPI
MANUAL CODE: CPI: A05-G01E; E07-D13B; E10-J02B4; E31-H05; F03-E01

ACCESSION NUMBER: 2002-743732 [81] WPIX
CROSS REFERENCE: 2003-147433; 2007-360691
DOC. NO. CPI: C2002-210791 [81]
DOC. NO. NON-CPI: N2002-585880 [81]
TITLE: Electrode base material for fuel cells comprises **porous carbon film** having fine continuous **holes** of preset average pore size and porosity
DERWENT CLASS: A85; L03; X16
INVENTOR: OYA N; YAO S
PATENT ASSIGNEE: (UBEI-C) UBE IND LTD
COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
JP 2002170574 <--	A	20020614	(200281)*	JA	8[5]	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 2002170574	A	**JP 2001-78497**	**20010319**

PRIORITY APPLN. INFO: **JP 2000-287361 20000921**
INT. PATENT CLASSIF.:
IPC RECLASSIF.: B01J0021-00 [I,C]; B01J0021-18 [I,A]; B01J0023-42 [I,A]; B01J0023-42 [I,C]; B01J0032-00 [I,A]; B01J0032-00 [I,C]; C01B0031-00 [I,C]; C01B0031-04 [I,A]; C04B0035-52 [I,A]; C04B0035-52 [I,C]; H01M0004-88 [I,A]; H01M0004-88 [I,C]; H01M0004-96 [I,A]; H01M0004-96 [I,C]; H01M0008-10 [I,A]; H01M0008-10 [I,C]

BASIC ABSTRACT:
JP 2002170574 A UPAB: 20050903
NOVELTY - An electrode base material comprises a **porous carbon film** having fine continuous **holes** with average pore size of 0.05-10 microns and porosity of 15-85%.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:
(1) metal micro-**dispersed** carbon film structure which has metal supported as nano-order **microparticle**; and

(2) carbon structure supporting metal catalyst comprising the metal micro-dispersed carbon film structure.

USE - Used for fuel cells such as solid polymer electrolyte group fuel cell or phosphoric acid group fuel cell.

ADVANTAGE - The gas flow is performed uniformly using the carbon film structure. The carbon film structure has high electroconductivity and thermal conductivity. TECHNOLOGY FOCUS:

ORGANIC CHEMISTRY - Preferred Electrode Base Material: The surfaces of the **carbon film** except the **pores** are flat. The **carbon film** has graphitization rate of 50% or more. The carbon film is obtained by heat carbonizing a porous heat resistant film under anaerobic atmosphere. Especially, several heat resistant polymer films are heat carbonized to form laminate of carbon film.

POLYMERS - Preferred Polymer: The heat resistant polymer is polyimide having biphenyl tetracarboxylic acid or its anhydride as a monomer component.

FILE SEGMENT: CPI; EPI
MANUAL CODE: CPI: A05-J01B; A12-E06A; L03-E04B
EPI: X16-C01; X16-E06

L20 ANSWER 7 OF 11 WPIX COPYRIGHT 2008 THE THOMSON CORP on STN
ACCESSION NUMBER: 2000-535617 [49] WPIX
DOC. NO. CPI: C2000-160125 [49]
DOC. NO. NON-CPI: N2000-396259 [49]
TITLE: Manufacturing of toner
DERWENT CLASS: A89; G08; P84; S06
INVENTOR: ITABASHI H
PATENT ASSIGNEE: (CANO-C) CANON KK
COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
JP 2000194159 <--	A	20000714	(200049)*	JA	13[2]	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 2000194159 A		**JP 1998-371310**	**19981225**

PRIORITY APPLN. INFO: **JP 1998-371310 19981225**
INT. PATENT CLASSIF.:
IPC RECLASSIF.: G03G0009-087 [I,A]; G03G0009-087 [I,C]
BASIC ABSTRACT:
JP 2000194159 A UPAB: 20050705

NOVELTY - In the manufacturing of toner utilizing a polymerization process comprising adding a monomer composition including at least a polymerizable monomer in a reaction medium mainly composed of organic solvent, dissolving at least the polymerizable monomer in the reaction medium, polymerizing the polymerizable monomer, and precipitating the polymer produced by the polymerization from the reaction medium to produce the toner **particles**, a **dispersion** phase A including at least a coloring agent and a polymerizable monomer and a continuous phase B including at least a polymerization starting agent, the **dispersion** stabilizer and an organic solvent exist in a state that they are separated by a **film C** having **pores**, the continuous phase B is heated

at a polymerization temperature, and then the **dispersion** phase A is gradually extruded to the continuous base B side through the **pores** of the **film C** to polymerize the same while mixing both phases.
USE - Effectively used in the toner jet image formation by an electrophotographic process.

FILE SEGMENT: CPI; GMPI; EPI
MANUAL CODE: CPI: A02-A00A; A08-S01; A10-B01; A10-D; A12-L05C2; G06-G05
EPI: S06-A04C1

L20 ANSWER 8 OF 11 WPIX COPYRIGHT 2008 THE THOMSON CORP on STN
ACCESSION NUMBER: 1996-041542 [05] WPIX
CROSS REFERENCE: 1991-304836
DOC. NO. CPI: C1996-014100 [05]
DOC. NO. NON-CPI: N1996-034827 [05]
TITLE: Void-containing polyester film for labels and posters - comprises film base material with **dispersed** thermoplastic resin **particles** and fine voids formed around the **particles**, and is soft enough to allow printing on it
DERWENT CLASS: A23; A94; P73
INVENTOR: HAMANO A; HATTORI K; ITO K; KUMANO K; KUZE K; OKUDAIRA T; TAGA A
PATENT ASSIGNEE: (TOYM-C) TOYO BOSEKI KK
COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
EP 688814 <--	A2	19951227	(199605)*	EN	18[7]	
EP 688814 <--	A3	19960131	(199621)	EN		
EP 688814 <--	B1	20030702	(200345)	EN		
DE 69133289 <--	E	20030807	(200359)	DE		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 688814 A2		**EP 1995-114048**	**19910409**
DE 69133289 E		**DE 1991-69133289**	**19910409**
EP 688814 A3	Div Ex	**EP 1991-105622**	**19910409**
EP 688814 B1	Div Ex	**EP 1991-105622**	**19910409**
EP 688814 A3		**EP 1995-114048**	**19910409**
EP 688814 B1		**EP 1995-114048**	**19910409**
DE 69133289 E		**EP 1995-114048**	**19910409**

FILING DETAILS:

PATENT NO	KIND	PATENT NO
EP 688814 B1	Div ex	EP 451797 A
DE 69133289 E	Based on	EP 688814 A

PRIORITY APPLN. INFO: **JP 1991-32067** **19910130**
JP 1990-95941 **19900410**

INT. PATENT CLASSIF.:
IPC RECLASSIF.: C08J0005-18 [I,A]; C08J0005-18 [I,C]

BASIC ABSTRACT:

EP 688814 A2 UPAB: 20060111 A void-containing polyester-type film, obtained by drawing a resin compsn. sheet containing at least a polyester and at least a thermoplastic resin in at least one direction, comprises: (a) a film base material comprising the polyester; (b) fine **particles** of the thermoplastic resin **dispersed** in the **film** base material; and **(c)** fine **voids** formed around the fine **particles**. The fine **particles** are extended in the direction of the drawing. They have a longitudinal dia. of 1-50 μm, a thickness of 10 μm or less and a ratio of longitudinal dia.:thickness of 2-100. Also claimed are: (1) a laminate having an outer surface made of polyester, polyurethane, polyacrylic or a mixture placed on at least one side of the above polyester film; and (2) a recording paper containing the above film.
USE - The material can be used as a base material for labels, posters, recording paper (claimed), wrapping paper, etc.
ADVANTAGE - The film is light in weight, reducing its price/unit area. It is soft enough to allow printing (claimed) or typing (claimed) on it, or even writing (claimed) with a pencil or ball-point pen, and white enough to have satisfactory opacity. It has higher surface energy than a film containing uniform voids and is more resistant to having its surface layer peeled off.

DOCUMENTATION ABSTRACT:

EP688814

A void-containing polyester-type film, obtained by drawing a resin compsn. sheet containing at least a polyester and at least a thermoplastic resin in at least one direction, comprises:

(a) a film base material comprising the polyester;

(b) fine **particles** of the thermoplastic resin **dispersed** in the film base material; and

(c) fine voids formed around the fine **particles**.

The fine **particles** are extended in the direction of the drawing. They have a longitudinal dia. of 1-50 μm, a thickness of 10 μm or less and a ratio of longitudinal dia.:thickness of 2-100.

Also claimed are:

(1) a laminate having an outer surface made of polyester, polyurethane, polyacrylic or a mixture placed on at least one side of the above polyester film; and

(2) a recording paper containing the above film.

USE

The material can be used as a base material for labels, posters, recording paper (claimed), wrapping paper, etc.

ADVANTAGE

The film is light in weight, reducing its price/unit area. It is soft enough to allow printing (claimed) or typing (claimed) on it, or even writing (claimed) with a pencil or ball-point pen, and white enough to have satisfactory opacity. It has higher surface energy than a film containing uniform voids and is more resistant to having its surface layer peeled off.

EXAMPLE

A resin compsn. comprising 86 weight% poly(ethylene terephthalate) of intrinsic viscosity 0.62; 10 weight% of polystyrene of melt flow index = 1.8 g/10 min. and 4 weight% of anatase TiO_2 was melt-extruded at 285 °C at 8.5 m/sec. from a T-die having a 1.0 mm slit. The non-drawn sheet of thickness 600 μm was drawn at 80 °C at a draw ratio of 3.5 in the direction of its length, then at 130 °C at a draw ratio of 5 in the transverse direction, and then fixed at 220 °C while relaxing the sheet at a rate of 3%.

The surface layer (thickness 5 μm) contained 1% voids, other parts contained 18% voids and the average void content was 16 volume%. The non-drawn sheet contained **particles** of average size 4.8 μm at the surface and 0.6 μm elsewhere. A comparative non-drawn sheet was prepared as above using a T-die having a 4.0 mm slit, then drawn as above. The surface layer contained 12% voids, other parts contained 20% voids and the average void content was 19 volume%. The non-drawn sheet contained uniformly **dispersed particles** of average size 5.9 μm.

The films had an apparent specific gravity of 1.16 and 1.12 resp.; a light transmittance of 15% and 14% resp. and a thickness of 52 and 54 μm resp. Surface strength was measured by a tape-peeling test. Most of the surface layer of the example was not peeled off and all of the surface layer of the comparative was peeled off. (JR)

PREFERRED

The film contains 1-40, (pref. 5-30) weight% of the thermoplastic resin and an average void percentage of 8-50, (pref. 8-30) volume%.

The thermoplastic resin is selected from a gp. containing polystyrene, polyolefin, polyamide, polyacrylic, cellulose, petroleum, synthetic and natural rubber, polycarbonate polysulphone polyacrylate and polyether type resins or may be a mixture (pref. is a polystyrene containing 5.0 weight% or less n-hexane extractables). The polyester is obtained by reacting ethylene glycol with terephthalic acid or a derivative

The outer surface layer of the laminate comprises a colouring agent, matt agent, antistatic agent, UV radiation absorber, a crosslinking agent or a mixture This layer is formed by applying a resin solution, emulsion or dispersion on the polyester film. The recording paper is suitable for transfer, printing, typing and writing on, and has adhesiveness to ink and coating agents.

FILE SEGMENT: CPI; GMPI
MANUAL CODE: CPI: A05-E01D3; A07-A03A; A07-A03D; A11-B02A; A12-S06A

L20 ANSWER 9 OF 11 WPIX COPYRIGHT 2008 THE THOMSON CORP on STN
ACCESSION NUMBER: 1993-036190 [04] WPIX
DOC. NO. CPI: C1993-016397 [21]
TITLE: Mono-disperse single and double emulsions - contain **particles** of mean dia. 0.3 to 40 microns and are free from **particles** with mean dia. as small as half mean dia. or less
DERWENT CLASS: J02
INVENTOR: KUKIZAKI M; NAKAJIMA T; NAKASHIMA T; SHIMIZU M
PATENT ASSIGNEE: (MIYA-N) MIYAZAKI KEN; (MIYA-N) MIYAZAKI-KEN
COUNTRY COUNT: 13

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 9300156 <--	A1	19930107	(199304)*	JA	50[15]	
EP 546174 <--	A1	19930616	(199324)	EN	28[15]	
JP 05220382 <--	A	19930831	(199339)	JA	14[15]	
US 5326484 <--	A	19940705	(199426)#	EN	23[15]	
EP 546174 <--	A4	19930915	(199527)	EN		
EP 546174 <--	B1	19971029	(199748)	EN	26[15]	
DE 69128087 <--	E	19971204	(199803)	DE		
JP 2733729 <--	B2	19980330	(199818)	JA	14[0]	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9300156	A1	WO 1991-JP882	19910629
EP 546174	A4	EP 1991-911947	
DE 69128087	E	DE 1991-69128087	19910629
EP 546174	A1	EP 1991-911947	19910629
EP 546174	B1	EP 1991-911947	19910629
DE 69128087	E	EP 1991-911947	19910629
EP 546174	A1	WO 1991-JP882	19910629
EP 546174	B1	WO 1991-JP882	19910629
DE 69128087	E	WO 1991-JP882	19910629
JP 05220382	A	JP 1992-211964	19920629
JP 2733729	B2	JP 1992-211964	19920629
US 5326484	A	US 1992-906282	19920629

Formatted: French (France)

FILING DETAILS:

PATENT NO	KIND	PATENT NO
DE 69128087 E	Based on	EP 546174 A
JP 2733729 B2	Previous Publ	JP 05220382 A
EP 546174 A1	Based on	WO 9300156 A
EP 546174 B1	Based on	WO 9300156 A
DE 69128087 E	Based on	WO 9300156 A

PRIORITY APPLN. INFO: WO 1991-JP882 19910629
US 1992-906282 19920629

INT. PATENT CLASSIF.:
MAIN: B01F003-08
SECONDARY: B01F017-00

IPC RECLASSIF.: B01F0003-08 [I,A]; B01F0003-08 [I,C]; B01F0005-00 [I,C]; B01F0005-04 [I,A]; B01F0005-04 [I,C]; B01F0005-10 [I,A]; B01J0013-00 [I,A]; B01J0013-00 [I,C]

BASIC ABSTRACT:

WO 1993000156 A1 UPAB: 20050823 Monodisperse single emulsion contains **particles** with a mean dia. within the range of 0.3-40 micron, and being free from **particles** with a dia. as small as 50% of the mean dia. or less and a monodisperse double emulsion containing **particles** with a mean dia. within the range of 0.3-40 micron and an internal phase concentration which is uniformly regulated to be within the range of 1-70%

FILE SEGMENT: CPI
MANUAL CODE: CPI: J02-A

L20 ANSWER 10 OF 11 WPIX COPYRIGHT 2008 THE THOMSON CORP on STN
ACCESSION NUMBER: 1991-305137 [42] WPIX
CROSS REFERENCE: 1995-321744; 1996-012097
DOC. NO. CPI: C1991-132138 [16]
TITLE: Water-in-oil type emulsion production - by dispersing in an aqueous phase at lower pressure into a fatty phase through a hydrophilic microporous membrane pretreated with fatty phase
DERWENT CLASS: D13; D21
INVENTOR: ASANO Y; FUJIMOTO M; KATO M; KATO R; KUMAZAWA R; OKONOGI S; SOTOYAMA K; TAKAHASHI K; TOYAMA K; WAKIGUCHI H; YUGUCHI H
PATENT ASSIGNEE: (MOMI-C) MORINAGA & CO LTD; (MORG-C) MORINAGA MILK CO LTD; (MORG-C) MORINAGA MILK IND CO LTD; (OKON-I) OKONOGI S
COUNTRY COUNT: 12

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
EP 452140 <--	A	19911016	(199142)*	EN		
CA 2040241 <--	A	19911012	(199201)	EN		
JP 03293026 <--	A	19911224	(199208)	JA		
JP 04118044 <--	A	19920420	(199222)	JA	6	
JP 04118045 <--	A	19920420	(199222)	JA	6	
JP 04210553 <--	A	19920731	(199240)	JA	7[1]	
JP 04258251 <--	A	19920914	(199243)	JA	7[1]	
US 5279847 <--	A	19940118	(199404)#	EN	17[1]	
JP 2773966 <--	B2	19980709	(199832)	JA	6	
JP 2773967 <--	B2	19980709	(199832)	JA	6	
EP 452140 <--	B1	19981230	(199905)	EN		
DE 69130685 <--	E	19990211	(199912)	DE		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 452140 A 19910411		EP 1991-303236	
JP 03293026 A		JP 1990-95368	19900411
JP 03293026 A		JP 1990-95368	19900531
JP 03293026 A 19900907		JP 1990-238365	
JP 04118044 A 19900907		JP 1990-238365	
JP 2773966 B2 19900907		JP 1990-238365	
JP 03293026 A 19900907		JP 1990-238366	
JP 04118045 A 19900907		JP 1990-238366	
JP 2773967 B2 19900907		JP 1990-238366	
JP 03293026 A 19901211		JP 1990-401418	
JP 04210553 A 19901211		JP 1990-401418	
JP 03293026 A		JP 1991-15567	19910206
JP 04258251 A		JP 1991-15567	19910206
DE 69130685 E 19910411		DE 1991-69130685	
EP 452140 B1 19910411		EP 1991-303236	
DE 69130685 E 19910411		EP 1991-303236	
US 5279847 A 19910411		US 1991-683182	
EP 452140 B1 19910411	Related to	EP 1995-200749	
EP 452140 B1 19910411	Related to	EP 1995-200750	

FILING DETAILS:

PATENT NO	KIND	PATENT NO
DE 69130685 E	Based on	EP 452140 A
EP 452140 B1	Related to	EP 672351 A
EP 452140 B1	Related to	EP 685167 A
JP 2773966 B2	Previous Publ	JP 04118044 A
JP 2773967 B2	Previous Publ	JP 04118045 A

PRIORITY APPLN. INFO:

JP 1991-15567	19910206
JP 1990-95368	19900411
JP 1990-238365	19900907
JP 1990-238366	19900907
JP 1990-401418	19901211
JP 1991-15567U	19910206
US 1991-683182	19910411

INT. PATENT CLASSIF.:
MAIN: A23D007-02
SECONDARY: A23D007-00; B01F003-08
IPC RECLASSIF.: A23D0007-00 [I,A]; A23D0007-00 [I,C]; A23D0007-015

[I,A]; A23D0007-015 [I,A]; A23D0007-015 [I,C];
A23D0007-015 [I,C]; A23D0007-02 [I,A]; A23D0007-02
[I,A]; A23D0007-02 [I,C]; A23D0007-02 [I,C];
A23D0007-06 [I,A]; A23D0007-06 [I,C]; B01F0003-08
[I,A]; B01F0003-08 [I,A]; B01F0003-08 [I,A];
B01F0003-08 [I,C]; B01F0003-08 [I,C]; B01F0003-08
[I,C]; B01J0013-00 [I,A]; B01J0013-00 [I,A];
B01J0013-00 [I,C]; B01J0013-00 [I,C]

BASIC ABSTRACT:

EP 452140 A UPAB: 20060107 Production of a water-in-oil (w/o) type emulsion, comprises dispersing in an aqueous phase at a low pressure into a fatty phase through a hydrophilic microporous membrane previously treated with the fatty phase.

Also claimed is a low-fat spread comprising the emulsions and a method for producing oil-in-water-in-oil (o1/w/o2) emulsion and oil-in-water (o/w) emulsion.

USE/ADVANTAGE - The emulsions are useful for foodstuffs, cosmetics, chemicals, feedstuffs etc. The process of the invention is hygienic and permits efficient production of stable emulsion with uniform **particle** sizes of a **dispersed** phase.

FILE SEGMENT: CPI
MANUAL CODE: CPI: D03-C; D03-G; D03-H01T; D08-B

L20 ANSWER 11 OF 11 WPIX COPYRIGHT 2008 THE THOMSON CORP on STN
ACCESSION NUMBER: 1990-002085 [01] WPIX
DOC. NO. CPI: C1990-000875 [21]
DOC. NO. NON-CPI: N1990-001480 [21]
TITLE: Humidity sensor - has **porous** silica **film** containing **dispersed** **carbon particles**
DERWENT CLASS: J04; L03; S03
INVENTOR: IKEJIRI M; YANAGISAWA M
PATENT ASSIGNEE: (SHIH-C) SEIKO EPSON CO LTD; (SHIH-C) SEIKO EPSON CORP
COUNTRY COUNT: 4

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
GB 2220074 <--	A	19891228	(199001)*	EN	36[15]	
JP 02132803 <--	A	19900522	(199026)	JA		
US 5001453 <--	A	19910319	(199114)	EN		
GB 2220074 <--	B	19920108	(199202)	EN		
KR 9402635 <--	B1	19940326	(199602)	KO		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
GB 2220074 A		**GB 1989-14537**	**19890623**
JP 02132803 A	**19880627**	**JP 1988-158788**	
JP 02132803 A	**19880718**	**JP 1988-178587**	

```
     JP 02132803 A                      JP 1988-178588
          19880718
     JP 02132803 A                      JP 1988-241621
          19880927
     KR 9402635 B1                      KR 1989-8684 19890623
     US 5001453 A                       US 1989-370725
          19890623

PRIORITY APPLN. INFO: JP 1988-241621    19880927
                       JP 1988-158788     19880627
                       JP 1988-178587     19880718
                       JP 1988-178588     19880718
INT. PATENT CLASSIF.:
 IPC RECLASSIF.:      G01N0027-12 [I,A]; G01N0027-12 [I,A]; G01N0027-12
                      [I,C]; G01N0027-12 [I,C]; H01C0007-00 [I,A];
                      H01C0007-00 [I,C]
BASIC ABSTRACT:
     GB 2220074 A   UPAB: 20050429 Humidity sensor comprises: a support of
     insulating material; electrodes on the support; and a porous SiO2 film
     containing dispersed C particles. The support may comprise an insulating
     substrate or an insulating substrate carrying an SiO2 support film.
     ADVANTAGE - Sensor provides reliable and accurate measurements over a wide
     humidity range and with low temperature dependence.
FILE SEGMENT:         CPI; EPI
MANUAL CODE:          CPI: J04-C04; L03-B01A3
                      EPI: S03-E02


=> fil hcap
FILE 'HCAPLUS' ENTERED AT 15:16:13 ON 10 JAN 2008
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)


Copyright of the articles to which records in this database refer is
held by the publishers listed in the PUBLISHER (PB) field (available
for records published or updated in Chemical Abstracts after December
26, 1996), unless otherwise indicated in the original publications.
The CA Lexicon is the copyrighted intellectual property of the
the American Chemical Society and is provided to assist you in searching
databases on STN.  Any dissemination, distribution, copying, or storing
of this information, without the prior written consent of CAS, is
strictly prohibited.

FILE COVERS 1907 - 10 Jan 2008  VOL 148 ISS 2
FILE LAST UPDATED: 9 Jan 2008  (20080109/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

=> fil compend
FILE 'COMPENDEX' ENTERED AT 15:16:17 ON 10 JAN 2008
Compendex Compilation and Indexing (C) 2008
Elsevier Engineering Inform
ation Inc (EEI). All rights reserved.
Compendex (R) is a registered Trade
mark of Elsevier Engineering Information Inc.
```

```
FILE LAST UPDATED: 7 JAN 2008        <20080107/UP>
FILE COVERS 1970 TO DATE.

<<< SIMULTANEOUS LEFT AND RIGHT TRUNCATION AVAILABLE IN
    THE BASIC INDEX >>>

=> fil japio
FILE 'JAPIO' ENTERED AT 15:16:20 ON 10 JAN 2008
COPYRIGHT (C) 2008 Japanese Patent Office (JPO)- JAPIO

FILE LAST UPDATED: 29 OCT 2007        <20071029/UP>
FILE COVERS APRIL 1973 TO JULY 26, 2007

>>> GRAPHIC IMAGES AVAILABLE <<<

=> fil inspec
FILE 'INSPEC' ENTERED AT 15:16:23 ON 10 JAN 2008
Compiled and produced by the IET in association WITH FIZ KARLSRUHE
COPYRIGHT 2008 (c) THE INSTITUTION OF ENGINEERING AND TECHNOLOGY (IET)

FILE LAST UPDATED: 21 DEC 2007        <20071221/UP>
FILE COVERS 1898 TO DATE.

<<< SIMULTANEOUS LEFT AND RIGHT TRUNCATION AVAILABLE IN
    THE ABSTRACT (/AB), BASIC INDEX (/BI) AND TITLE (/TI) FIELDS  >>>


=> d 136 iall 1-20


L36   ANSWER 1 OF 20  INSPEC  (C) 2008 IET on STN
ACCESSION NUMBER:         2006:9219668  INSPEC  Full-text
TITLE:                    Antibacterial evaluation of carbon-ceramic
                          composites
AUTHOR:                   Yamamoto, O.; Nakagawa, Z. (Center for
                          Geo-environ. Sci., Akita Univ., Japan)
SOURCE:                   Sohn International Symposium. Advanced
                          Processing of Metals and Materials. Proceedings
                          of the International Symposium. New, Improved
                          and Existing Technologies: Non-Ferrous Materials
                          Extraction and Processing, 2006, p. 545-53 of
                          xcv+899 pp., 20 refs.
                          Editor(s): Kongoli, F.; Reddy, R.G.
                          ISBN: 978 0 87339 637 0
                          Published by: TMS (Minerals, Metals & Materials
                          Society), Warrendale, PA, USA
                          Conference: Sohn International Symposium.
                          Advanced Processing of Metals and Materials.
                          Proceedings of the International Symposium. New,
                          Improved and Existing Technologies: Non-Ferrous
                          Materials Extraction and Processing, San Diego,
                          CA, USA, 27-31 Aug. 2006
DOCUMENT TYPE:            Conference; Conference Article
TREATMENT CODE:           Practical
COUNTRY:                  United States
LANGUAGE:                 English
ABSTRACT:   In antibacterial evaluation of carbon-ceramic composites, we prepared
two type composites with emphasis on carbon-ZnO system; one was porous carbon
materials containing ZnO nano- particles and another was porous ZnO coated with
```

carbon thin **film**. **Porous carbon** samples containing ZnO at highly **dispersed** state were prepared by carbonizing the resin exchanged by Zn2+ ion. **Porous** ZnO coated with **carbon** thin **film** was obtained by the pyrolysis of poly (vinyl alcohol). Antibacterial activity of these composites obtained was evaluated by measuring the changes in electrical conductivity with bacteria growth. The antibacterial activity on the composites increased with the increase of the amount of ZnO in composite and decreased with the increase of carbonization temperature. The antibacterial activity for Staphylococcus aureus was found to be stronger than that for Escherichia coli. No activity of the carbon samples without ZnO was observed. The occurrence of antibacterial activity was supposed to be due to the generation of hydrogen peroxide from ZnO in composite. In the present work, antibacterial activity of carbon-ZnO composites was studied in the details

CLASSIFICATION CODE: E1525 Industrial processes; E3628 Biotechnology industry; E1710 Engineering materials
CONTROLLED TERM: biotechnology; carbon; ceramics; composite materials; electrical conductivity; microorganisms; nanoparticles; pyrolysis; resins; zinc compounds
SUPPLEMENTARY TERM: antibacterial evaluation; carbon-ceramic composites; porous carbon materials; ZnO nanoparticles; ZnO coated carbon thin film; dispersed state; resin; pyrolysis; poly (vinyl alcohol); electrical conductivity; bacteria growth; carbonization temperature; Staphylococcus aureus; Escherichia coli; hydrogen peroxide; C-ZnO
CHEMICAL INDEXING: CZnO ss, Zn ss, C ss, O ss
ELEMENT TERMS: O; O*Zn; ZnO; Zn cp; cp; O cp; Zn; Zn2+; Zn ip 2; ip 2

L36 ANSWER 2 OF 20 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:302639 HCAPLUS Full-text
DOCUMENT NUMBER: 142:358074
ENTRY DATE: Entered STN: 08 Apr 2005
TITLE: Electrode for fuel cell, its manufacture, membrane-electrode laminate, and the fuel cell
INVENTOR(S): Oya, Nobuo; Takagi, Jun
PATENT ASSIGNEE(S): Ube Industries, Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
INT. PATENT CLASSIF.:
MAIN: H01M004-86
SECONDARY: H01M004-88; H01M008-10
CLASSIFICATION: 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005093217	A	20050407	JP 2003-324476	20030917 <--

PRIORITY APPLN. INFO.: JP 2003-324476 20030917

<--

PATENT CLASSIFICATION CODES:

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2005093217	ICM	H01M004-86
	ICS	H01M004-88; H01M008-10
	IPCI	H01M0004-86 [ICM,7]; H01M0004-88 [ICS,7]; H01M0008-10 [ICS,7]
	IPCR	H01M0004-86 [I,A]; H01M0004-86 [I,C*]; H01M0004-88 [I,A]; H01M0004-88 [I,C*]; H01M0008-10 [I,A]; H01M0008-10 [I,C*]
	FTERM	5H018/AA06; 5H018/AS01; 5H018/BB00; 5H018/BB08; 5H018/DD08; 5H018/EE03; 5H018/EE17; 5H026/AA06

ABSTRACT:
The electrode has a **porous C film** structure, catalyst metal **particles**, and an ion-conductive electrolyte material as main constituent material; and furthermore is combined with a water-repellent material. The electrode is manufactured by depositing and fixing a **porous C film** on a water-repellent material; **dispersing** catalyst noble metal fine ***particles*** in a **dispersant**; loading the fine ***particles*** on the water-repellent material fixed C film; and coating the electrolyte material on the C film. The laminate is obtained by bonding the above electrode to an electrolyte membrane. The fuel cell has the above electrode as constituent element.

SUPPL. TERM: fuel cell electrode electrolyte membrane laminate; manuf noble metal catalyst loaded **porous C film** electrode

INDEX TERM: Polyoxyalkylenes, uses
ROLE: DEV (Device component use); USES (Uses)
(fluorine- and sulfo-containing, ionomers; manufacture of electrodes containing noble metal catalyst loaded **porous C films** for fuel cells)

INDEX TERM: Fuel cell electrodes
Fuel cells
(manufacture of electrodes containing noble metal catalyst loaded **porous C films** for fuel cells)

INDEX TERM: Fluoropolymers, uses
ROLE: DEV (Device component use); USES (Uses)
(manufacture of electrodes containing noble metal catalyst loaded **porous C films** for fuel cells)

INDEX TERM: Fluoropolymers, uses
ROLE: DEV (Device component use); USES (Uses)
(polyoxyalkylene-, sulfo-containing, ionomers; manufacture of electrodes containing noble metal catalyst loaded **porous C films** for fuel cells)

INDEX TERM: Ionomers
ROLE: DEV (Device component use); USES (Uses)
(polyoxyalkylenes, fluorine- and sulfo-containing; manufacture of electrodes containing noble metal catalyst loaded **porous C films** for fuel cells)

INDEX TERM: Polyimides, uses
ROLE: CPS (Chemical process); PEP (Physical, engineering or chemical process); TEM (Technical or

engineered material use); PROC (Process); USES (Uses)
(porous; manufacture of electrodes containing noble metal catalyst loaded **porous C films** for fuel cells)

INDEX TERM: Carbonaceous materials (technological products)
ROLE: DEV (Device component use); USES (Uses)
(porous; manufacture of electrodes containing noble metal catalyst loaded **porous C films** for fuel cells)

INDEX TERM: 7440-06-4, **Platinum** black, uses 9002-84-0, PTFE
ROLE: DEV (Device component use); USES (Uses)
(manufacture of electrodes containing noble metal catalyst loaded **porous C films** for fuel cells)

L36 ANSWER 3 OF 20 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:892223 HCAPLUS Full-text
DOCUMENT NUMBER: 139:352259
ENTRY DATE: Entered STN: 14 Nov 2003
TITLE: Aligned **carbon** nanotube **films** on **porous** carriers and a process for producing them
INVENTOR(S): Someya, Masao; Fujii, Takashi
PATENT ASSIGNEE(S): Mitsubishi Gas Chemical Company, Inc., Japan
SOURCE: U.S. Pat. Appl. Publ., 12 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
INT. PATENT CLASSIF.:
MAIN: D01F009-12
US PATENT CLASSIF.: 423447300
CLASSIFICATION: 49-1 (Industrial Inorganic Chemicals)
Section cross-reference(s): 57
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2003211029	A1	20031113	US 2003-393364 <--		20030321
JP 2004002182	A	20040108	JP 2003-120697 <--		20030320
PRIORITY APPLN. INFO.:			JP 2002-83044 <--	A	20020325

PATENT CLASSIFICATION CODES:

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2003211029	ICM	D01F009-12
	INCL	423447300
	IPCI	D01F0009-12 [ICM,7]
	IPCR	D01F0009-12 [I,C*]; D01F0009-127 [I,A]
	NCL	423/447.300

```
                  ECLA    D01F009/127
JP 2004002182     IPCI    C01B0031-02 [ICM,7]; C01B0031-00 [ICM,7,C*];
                          B01J0021-12 [ICS,7]; B01J0021-00 [ICS,7,C*];
                          B01J0023-75 [ICS,7]; B01J0032-00 [ICS,7];
                          B82B0003-00 [ICS,7]; C01B0033-00 [ICS,7];
                          C01B0033-12 [ICS,7]; C01F0007-02 [ICS,7];
                          C01F0007-00 [ICS,7,C*]; H01J0009-02 [ICS,7];
                          B01J0023-74 [ICS,7]
                  IPCR    B82B0003-00 [I,C*]; B82B0003-00 [I,A];
                          B01J0021-00 [I,C*]; B01J0021-12 [I,A];
                          B01J0023-75 [I,C*]; B01J0023-75 [I,A];
                          B01J0032-00 [I,C*]; B01J0032-00 [I,A];
                          C01B0031-00 [I,C*]; C01B0031-02 [I,A];
                          C01B0033-00 [I,C*]; C01B0033-00 [I,A];
                          C01B0033-12 [I,A]; C01F0007-00 [I,C*];
                          C01F0007-02 [I,A]; H01J0009-02 [I,C*];
                          H01J0009-02 [I,A]
                  FTERM   4G069/AA03; 4G069/AA08; 4G069/BA03A; 4G069/BA03B;
                          4G069/BC59A; 4G069/BC66A; 4G069/BC67A;
                          4G069/BC67B; 4G069/BC68A; 4G069/CD10; 4G069/DA06;
                          4G069/EA01Y; 4G069/FB13; 4G072/AA36; 4G072/AA38;
                          4G072/BB02; 4G072/GG02; 4G072/GG03; 4G072/HH14;
                          4G072/JJ26; 4G072/LL05; 4G072/MM01; 4G072/PP17;
                          4G072/QQ06; 4G072/QQ09; 4G072/RR11; 4G072/RR15;
                          4G072/UU01; 4G076/AA02; 4G076/AA30; 4G076/AB11;
                          4G076/BA03; 4G076/BA13; 4G076/BB02; 4G076/BC02;
                          4G076/BC05; 4G076/BF04; 4G076/BF06; 4G076/CA10;
                          4G076/CA11; 4G146/AA11; 4G146/AB07; 4G146/AD24;
                          4G146/AD29; 4G146/AD32; 4G146/BA12; 4G146/BA42;
                          4G146/BB23; 4G146/BC03; 4G146/BC08; 4G146/BC44;
                          5C127/BA09; 5C127/BB07; 5C127/CC03; 5C127/CC62;
                          5C127/CC63; 5C127/CC66; 5C127/CC67; 5C127/DD12;
                          5C127/DD20; 5C127/DD38; 5C127/DD39; 5C127/DD63;
                          5C127/DD64; 5C127/EE17
```

ABSTRACT:
Fine catalyst **particles** are loaded on a sol-gel method porous carrier having fine pores of 0.1-50 nm and a carbon compound is decomposed to form a carbon nanotube film on the carrier that is aligned perpendicular to the carrier surface. The starting sol to be processed by a sol-gel method is a **dispersion** of fine alumina **particles**, fine aluminum hydroxide **particles**, fine silica ***particles*** or mixts. thereof. Alternatively, the starting sol may be an aluminum alkoxide, an alkoxysilane, a mixture thereof or a solution of an aluminum alkoxide, an alkoxysilane or a mixture thereof. If desired, a flammable or a thermally decomposable organic compound may be added as a microporous template.

SUPPL. TERM: aligned **carbon** nanotube **film**
porous carrier sol gel

INDEX TERM: Catalysts
Sol-gel processing
(aligned **carbon** nanotube **films** on **porous** carriers and a process for producing them)

INDEX TERM: Aromatic hydrocarbons, reactions
Hydrocarbons, reactions
ROLE: RCT (Reactant); RACT (Reactant or reagent)
(aligned **carbon** nanotube **films** on **porous** carriers and a process for producing them)

INDEX TERM: Nanotubes
(carbon, **film**; aligned **carbon** nanotube **films** on **porous** carriers and a process for producing them)

INDEX TERM: Hydrocarbons, reactions
ROLE: RCT (Reactant); RACT (Reactant or reagent)
(oxygen-containing; aligned **carbon** nanotube **films** on **porous** carriers and a process for producing them)

INDEX TERM: Ceramics
(**porous** carrier; aligned **carbon** nanotube **films** on **porous** carriers and a process for producing them)

INDEX TERM: Hydrocarbons, reactions
ROLE: RCT (Reactant); RACT (Reactant or reagent)
(unsatd.; aligned **carbon** nanotube **films** on **porous** carriers and a process for producing them)

INDEX TERM: 7439-89-6, Iron, uses 7439-98-7, Molybdenum, uses 7440-02-0, Nickel, uses 7440-48-4, Cobalt, uses
ROLE: CAT (Catalyst use); USES (Uses)
(aligned **carbon** nanotube **films** on **porous** carriers and a process for producing them)

INDEX TERM: 64-17-5, Ethanol, reactions 115-07-1, Propylene, reactions
ROLE: RCT (Reactant); RACT (Reactant or reagent)
(aligned **carbon** nanotube **films** on **porous** carriers and a process for producing them)

INDEX TERM: 7440-44-0, Carbon, uses
ROLE: TEM (Technical or engineered material use); USES (Uses)
(nanotubes, **film**; aligned **carbon** nanotube **films** on **porous** carriers and a process for producing them)

INDEX TERM: 1344-28-1, Alumina, uses 7631-86-9, Silica, uses 159995-97-8, Aluminum silicon oxide
ROLE: TEM (Technical or engineered material use); USES (Uses)
(**porous** carrier; aligned **carbon** nanotube **films** on **porous** carriers and a process for producing them)

L36 ANSWER 4 OF 20 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:872491 HCAPLUS Full-text
DOCUMENT NUMBER: 139:352690
ENTRY DATE: Entered STN: 07 Nov 2003
TITLE: Fuel cell electrode using **porous carbon film**, and its use in membrane-electrode assembly and fuel cell
INVENTOR(S): Oya, Nobuo; Takagi, Jun
PATENT ASSIGNEE(S): Ube Industries, Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
INT. PATENT CLASSIF.:
MAIN: H01M004-96
SECONDARY: B01J023-42; H01M008-10

CLASSIFICATION: 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003317728	A	20031107	JP 2002-127076	20020426 <--
PRIORITY APPLN. INFO.:			JP 2002-127076	20020426 <--

PATENT CLASSIFICATION CODES:

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2003317728	ICM	H01M004-96
	ICS	B01J023-42; H01M008-10
	IPCI	H01M0004-96 [ICM,7]; B01J0023-42 [ICS,7]; H01M0008-10 [ICS,7]
	IPCR	B01J0023-42 [I,C*]; B01J0023-42 [I,A]; H01M0004-96 [I,C*]; H01M0004-96 [I,A]; H01M0008-10 [I,C*]; H01M0008-10 [I,A]

ABSTRACT:
The electrode is made of the film having continuous pores in which noble metal **particles** are supported and C **particles** are filled. Preferably, functional groups are applied on the film surface for hydrophilicity. In the title assembly, the electrode is bonded to both sides of a polymer electrolyte membrane. Desired amount of the noble metal **particles** are **dispersed** in the electrode for effective utilization, and the resulting fuel cell shows stable operation.

SUPPL. TERM: fuel cell electrode **porous carbon film**; noble metal **particle porous carbon film** electrode; **carbon particle porous carbon film** electrode; membrane electrode assembly fuel cell

INDEX TERM: Polyimides, preparation
ROLE: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(C film precursor; fuel cell electrode using **porous C film** filled with noble metal **particles** and C **particles**)

INDEX TERM: Carboxyl group
Hydroxyl group
(C film surface component; fuel cell electrode using **porous C film** filled with noble metal **particles** and C **particles**)

INDEX TERM: Fuel cell electrodes
(fuel cell electrode using **porous C film** filled with noble metal **particles** and C **particles**)

INDEX TERM: Noble metals

ROLE: CAT (Catalyst use); DEV (Device component use); USES (Uses)
(fuel cell electrode using **porous** **C film** filled with noble metal **particles** and C **particles**)

INDEX TERM: 29319-22-0P, 3,3',4,4'-Biphenyltetracarboxylic dianhydride-p-phenylenediamine copolymer
32197-39-0P, 3,3',4,4'-Biphenyltetracarboxylic dianhydride-p-phenylenediamine copolymer, polyimide SRU
ROLE: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(C film precursor; fuel cell electrode using **porous C film** filled with noble metal **particles** and C **particles**)

INDEX TERM: 7440-06-4, **Platinum**, uses
ROLE: CAT (Catalyst use); DEV (Device component use); USES (Uses)
(fuel cell electrode using **porous** **C film** filled with noble metal **particles** and C **particles**)

INDEX TERM: 7440-44-0P, Carbon, uses
ROLE: CAT (Catalyst use); DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(fuel cell electrode using **porous** **C film** filled with noble metal **particles** and C **particles**)

INDEX TERM: 264217-10-9, Nafion 1135
ROLE: DEV (Device component use); USES (Uses)
(membrane, membrane-electrode assembly formed with; fuel cell electrode using **porous** **C film** filled with noble metal **particles** and C **particles**)

L36 ANSWER 5 OF 20 COMPENDEX COPYRIGHT 2008 EEI on STN

ACCESSION NUMBER: 2003(8):4874 COMPENDEX Full-text

TITLE: NiO-SiO2 sol-gel nanocomposite films for optical gas sensor.

AUTHOR: Martucci, A. (Dipto. Ingegneria Mecc. - Settore M. Universita di Padova, 35131 Padova, Italy); Bassiri, N.; Guglielmi, M.; Armelao, L.; Gross, S.; Pivin, J.C.

SOURCE: Journal of Sol-Gel Science and Technology v 26 n 1-3 January/March 2003 2003.p 993-996

SOURCE: Journal of Sol-Gel Science and Technology v 26 n 1-3 January/March 2003 2003.p 993-996
CODEN: JSGTEC ISSN: 0928-0707

PUBLICATION YEAR: **2003**

DOCUMENT TYPE: Journal

TREATMENT CODE: Experimental

LANGUAGE: English

ABSTRACT: Recently nanocomposites with sensoring function are becoming a new area of interest in the field of optical gas sensor. In fact, the optical transmittance of nano-**particles** or thin films has been reported to be changed by atmosphere gases. In particular it was found that NiO, Co3O4 and Mn3O4 thin films showed reversible decrease in the Vis-NIR absorption due to CO. Aim of this work is the synthesis and the characterization of SiO2 sol-gel glass films doped with NiO nanocrystals. Films of composition (100 -X)SiO2-XNiO with X = 10, 20, 40, were

obtained by mixing a matrix solution of Si(OC2H5)4 (TEOS) and CH3Si(OC2 H5)3 (MTES) as SiO2 precursors, with a doping solution containing NiCl2 as precursor for NiO **particles**. 3-Aminopropyltriethoxysilane (3-APTES), bearing either an ammine group capable of coordinating the Ni ions and hydrolysable siloxane groups for anchoring the metal complex moiety to the silicate matrix, was used as bifunctional ligand. Transmission electron microscopy micrographs showed a uniform **distribution** of round shaped nanoparticles in film heated at 500deg C with a mean diameter of 2.5 nm. The film composition evaluated from Rutherford backscattering spectrometry was in good agreement with the nominal one. As expected the density of the films heated at 1000deg C is much higher than the density of the film heated at 500deg C due to a residual porosity. Fourier transform infrared spectra also confirmed the presence of residual **porosity** in the **films** heated at 500deg C. 13 Refs. CLASSIFICATION CODE: 933.1 Crystalline Solids; 804 Chemical Products Generally; 801 Chemistry; 802.3 Chemical Operations; 741.3 Optical Devices and Systems

CONTROLLED TERM: *Nanostructured materials; Fourier transform infrared spectroscopy; Mixing; Doping (additives); Composition; Transmission electron microscopy; Rutherford backscattering spectroscopy; Sol-gels; Thin films; Chemical sensors

SUPPLEMENTARY TERM: Optical gas sensors

ELEMENT TERM: Ni*O; NiO; Ni cp; cp; O cp; Co*O; Co3O; Co cp; Mn*O; Mn3O; Mn cp; C*O; CO; C cp; O*Si; SiO; Si cp; O; C*H*O*Si; Si(OC2H; H cp; C*O*Si; Si(OC; Cl*Ni; NiCl; Cl cp; Ni; Ni*O*Si; Ni sy 3; sy 3; O sy 3; Si sy 3; NiO-SiO

L36 ANSWER 6 OF 20 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER:	2003:660632 HCAPLUS Full-text
DOCUMENT NUMBER:	139:357206
ENTRY DATE:	Entered STN: 25 Aug 2003
TITLE:	NdFeB thick films prepared by tape casting
AUTHOR(S):	Pawlowski, B.; Schwarzer, S.; Rahmig, A.; Topfer, J.
CORPORATE SOURCE:	Hermsdorfer Institut fur Technische Keramik e.V., Hermsdorf, 07629, Germany
SOURCE:	Journal of Magnetism and Magnetic Materials (2003), 265(3), 337-344 CODEN: JMMMDC; ISSN: 0304-8853
PUBLISHER:	Elsevier Science B.V.
DOCUMENT TYPE:	Journal
LANGUAGE:	English
CLASSIFICATION:	77-8 (Magnetic Phenomena) Section cross-reference(s): 38

ABSTRACT:

NdFeB films of thickness between 100 and 800 µm were prepared by tape casting of a slurry containing 84-95 wt% of com. NdFeB powder (MQP-B, -Q and -S). After curing the flexible green tapes at 120.degree.C non-**porous** magnetic **films** are obtained. The remanence of the films is in the range of 350-450 mT and the coercivity is between 300 and 800 kA/m depending on the type of MQP powder used. The magnetic properties of the films are discussed in relation to film composition and type of magnetic material. For MEMS applications the thick films are magnetized with a multi-pole stripe pattern with 1 mm pole pitch. The induction at the surface of the films was measured with a Hall probe and compared to theor. calcns. The results indicate that the films are completely magnetized regardless of the film thickness. Tape-casted NdFeB thick films are promising candidates for applications in micro-systems or actuators. Miniaturization of the magnet components

is one of the key issues in the development of electromagnetic micro-systems, thus creating a need for replacement of small sintered magnets by magnetic thick film components. Other applications include encoders.

SUPPL. TERM: neodymium iron boron magnetic film remanence coercivity
INDEX TERM: Casting of metals
Coercive force (magnetic)
Demagnetization
Density
Heat treatment
Magnetic field effects
Magnetic films
Magnetic induction
Microstructure
Particle size distribution
Porosity
Remanence
(NdFeB thick films prepared by tape casting)
INDEX TERM: Polymers, processes
ROLE: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(bonding agents; NdFeB thick films prepared by tape casting)
INDEX TERM: 94282-59-4
ROLE: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(NdFeB thick films prepared by tape casting)
REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD.

REFERENCE(S):
(1) Chin, T; J Magn Magn Mater 2000, V209, P75 HCAPLUS
(2) Christoph, V; Program Package "MAGFIELD" 1999
(3) Cugat, O; Proceedings of the 17th International Workshop Rare Earth Magnets and their Application 2002, P478 HCAPLUS
(4) Gollhardt, E; F&M 1998, V106, P503
(5) Kallenbach, E; Mechantronics 1999, V9, P769
(6) Keavney, D; J Appl Phys 1997, V81, P4441 HCAPLUS
(7) Kube, H; Proceedings of the 14th ASPE Annual Meeting 1999, P579
(8) Lemke, H; Nanostructured Mater 1997, V9, P371 HCAPLUS
(9) Ma, B; J Magn Magn Mater 2002, V239, P418 HCAPLUS
(10) Magnequench; Product catalogue
(11) Makita, K; Jpn J Powder Metall 1998, V22, P365 HCAPLUS
(12) Rieger, G; J Appl Phys 2000, V87(9), P5329 HCAPLUS
(13) Topfer, J; In preparation
(14) Topfer, J; Proceedings of the 5th Symposium "Magnetoresistive Sensors:Basics, Preparation and Applications" 1999
(15) Wyslocki, J; J Mater Sci 1992, V27, P3777 HCAPLUS
(16) Yamashita, S; IEEE, Trans Magn 1992, V7, P45

L36 ANSWER 7 OF 20 HCAPLUS

ACCESSION NUMBER: 2002:632092 HCAPLUS Full-text
DOCUMENT NUMBER: 138:65509
ENTRY DATE: Entered STN: 22 Aug 2002
TITLE: Pulsed microplasma cluster source technique for synthesis of nanostructured carbon films
AUTHOR(S): Milani, P.; Piseri, P.; Barborini, E.; Kholmanov, I. N.
CORPORATE SOURCE: INFM-Dipartimento di Fisica, Universita di Milano, Milan, I-20133, Italy
SOURCE: NATO Science Series, II: Mathematics, Physics and Chemistry (2002), 61(New Trends in Intercalation Compounds for Energy Storage), 561-564
CODEN: NSSICD
PUBLISHER: Kluwer Academic Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English
CLASSIFICATION: 78-1 (Inorganic Chemicals and Reactions)
ABSTRACT:
Nanostructured carbon thin films have been synthesized using the supersonic cluster beam deposition technique. Carbon clusters are produced in pulsed microplasma cluster source by using elec. discharge vaporization of the cathode. By controlling the key parameters of the vaporization process and some parts of the exptl. arrangement, cluster beam properties such as mass **distribution** of the cluster beam and kinetic energy of the **particles** can be improved. The method is also characterized by the high deposition rate of supersonic expanded cluster beam in comparison with other related techniques. Low-d. nanostructured **carbon porous** thin ***films*** synthesized by the method may find use in nanotechnol. applications.

SUPPL. TERM: pulsed microplasma cluster synthesis nanostructured carbon film
INDEX TERM: Clusters
Nanocrystalline materials
Plasma
(pulsed microplasma cluster source technique for synthesis of nanostructured carbon films)
INDEX TERM: 7440-44-0, Carbon, processes
ROLE: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)
(pulsed microplasma cluster source technique for synthesis of nanostructured carbon films)
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD.
REFERENCE(S):
(1) Amaratunga, G; Nature (London) 1996, V383, P312
(2) Milani, P; Cluster Beam Synthesis of Nanostructured Materials 1999
(3) Muller, D; Atomic and Molecular Beam Methods 1988, V1
(4) Reis, V; Chem Phys 1963, V39, P3240 HCAPLUS

L36 ANSWER 8 OF 20 HCAPLUS DUPLICATE 1
ACCESSION NUMBER: 2000:419904 HCAPLUS Full-text
DOCUMENT NUMBER: 133:47900
ENTRY DATE: Entered STN: 23 Jun 2000
TITLE: The quantitative morphology of roadside and background urban aerosol in Plymouth, UK
AUTHOR(S): Dye, A. L.; Rhead, M. M.; Trier, C. J.

CORPORATE SOURCE: Department of Environmental Sciences, University of Plymouth, Plymouth, PL4 8AA, UK
SOURCE: Atmospheric Environment (2000), 34(19), 3139-3148
CODEN: AENVEQ; ISSN: 1352-2310
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
CLASSIFICATION: 59-2 (Air Pollution and Industrial Hygiene)
Section cross-reference(s): 51

ABSTRACT:
Anal. of the fine urban aerosol (<1 μm) was made using direct sampling of urban aerosol onto **porous carbon films** (PCF). The efficiency of collection was low, but the samples were representative and enabled transmission electron microscopy (TEM) for sub-micron **particle** anal. Measurement was made of the fractal dimensions and diameter of **particles**. PCF were used in the simultaneous collection of urban roadside and background aerosol, on four dates between Mar. and August, 1997, in Plymouth, England. The aerosol was classified into agglomerate and nonagglomerate groups. At the roadside, agglomerate **particles** accounted for 94% of the ***particles*** analyzed; this fell to 89% of the **particles** in the background samples. The anal. of agglomerate **particles** by energy **dispersive** x-ray spectroscopy confirmed their carbonaceous nature. A variety of agglomerate **particles** were found having coatings and mixed morphols. The morphol. of ***particles*** was analyzed using two fractal anal. techniques to derive a d. fractal dimension and a perimeter fractal dimension. These measures quant. describe the space-filling quality and the roughness of the boundary of the two-dimensional projection of the **particle**. The average perimeter fractal dimension (PFD) of aerosol was consistently significantly greater at the roadside than the background (+0.02), in anal. both including and excluding the nonfractal **particles**. There is evidence of a change in the average morphol. of aerosol between roadside and background aerosol, which is still the case when nonfractal ***particles*** are removed. This morphol. change may be due to the inclusion of **particles** from other nonagglomerate sources, which have a low fractal dimension, or it may be indicative of a smoother, aged roadside aerosol at the background site. The consistency of the difference between the roadside and the background aerosol morphol. suggests that there is some morphol. change that occurs in ***particles*** between the roadside and the background site.

SUPPL. TERM: urban aerosol roadside background quant morphol Plymouth England
INDEX TERM: Air pollution
(**particulate**; quant. morphol. of roadside and background urban aerosol in Plymouth, England)
INDEX TERM: Airborne **particles**
Atmospheric aerosols
(quant. morphol. of roadside and background urban aerosol in Plymouth, England)
INDEX TERM: Carbonaceous materials (technological products)
ROLE: POL (Pollutant); OCCU (Occurrence)
(quant. morphol. of roadside and background urban aerosol in Plymouth, England)
INDEX TERM: Fractals
(quant. morphol. of roadside and background urban aerosol in Plymouth, England, in relation to)
REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS

RECORD.

REFERENCE(S):
(1) Abrahamson, J; Nature 1977, V266, P323 HCAPLUS
(2) Barnsley, M; The Science of Fractal Images 1988
(3) Berube, K; Microscopy and Analysis 1997, P11
(4) Chan, Y; Atmospheric Environment 1997, V31(22), P3773 HCAPLUS
(5) Chow, J; California Atmospheric Environment 1992, V26A(4), P693 HCAPLUS
(6) Colbeck, I; Journal of Aerosol Science 1990, V21(4), P527
(7) Colbeck, I; Journal of Aerosol Science 1997, V28(5), P715 HCAPLUS
(8) Committee On The Medical Effects Of Air Pollutants; Health Effects of Non-Biological Particles, Department of Health 1995
(9) Dye, A; Journal of Microscopy 1997, V187(2), P134 HCAPLUS
(10) Fahmy, T; xISTAT 2.0, Microsoft Excel add-in, fahmy@engref.fr 1996
(11) Huang, P; Journal of Aerosol Science 1994, V25(3), P447 HCAPLUS
(12) Kao, A; Environmental Science and Technology 1995, V29, P19 HCAPLUS
(13) Katrinak, K; Environmental Science and Technology 1992, V26, P1967 HCAPLUS
(14) Katrinak, K; Environmental Science and Technology 1993, V27, P539 HCAPLUS
(15) Kaye, B; Chaos and Complexity:Discovering the Surprising Patterns of Science and Technology, VCH 1993
(16) Kindratenko, V; Environmental Science and Technology 1994, V28, P2197 HCAPLUS
(17) Koylu, U; Langmuir 1995, V11, P4848
(18) Lawther, P; Proceedings of the Royal Society A 1968, V307, P223 HCAPLUS
(19) Medalia, A; Particulate carbon and other components of soot and carbon black Carbon 1982, V20, P481 HCAPLUS
(20) Murphy, C; Handbook of Particle Sampling and Analysis Methods Verlag Chemie 1984
(21) Oke, T; Boundary Layer Climates 1978
(22) Quality Of Urban Air Review Group; Airborne Particulate Matter in the United Kingdom:Third Report of the Quality of Urban Air Review Group 1996
(23) Quality Of Urban Air Review Group; Urban Air Quality in the United Kingdom 1993
(24) Seaton, A; The Lancet 1995, V345, P176 MEDLINE
(25) Skillas, G; Journal of Aerosol Science 1998, V29(4), P411 HCAPLUS
(26) Twomey, S; Atmospheric Aerosols 1977
(27) Waller, R; London Conference on Museum Climatology International Institute for Renovation of Works of Art 1967, P65
(28) Xie, Y; Aerosol Science and Technology 1994, V20, P161

L36 ANSWER 9 OF 20 HCAPLUS
ACCESSION NUMBER: 1997:761876 HCAPLUS Full-text
DOCUMENT NUMBER: 128:51684

ENTRY DATE: Entered STN: 06 Dec 1997
TITLE: Manufacture of ultrafine particles by irradiation of a porous or textured target on substrates using high-energy beam for vaporization
INVENTOR(S): Tanaka, Shun-ichiro; Xu, Bingshe
PATENT ASSIGNEE(S): Research Development Corporation of Japan, Japan; Tokyo Shibaura Electric Co.
SOURCE: Eur. Pat. Appl., 26 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
INT. PATENT CLASSIF.:
MAIN: B22F009-02
SECONDARY: B22F001-00; C01B031-02; B01J019-12
CLASSIFICATION: 56-4 (Nonferrous Metals and Alloys)
Section cross-reference(s): 48, 57, 76
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
EP 808682	A2	19971126	EP 1997-303487		19970522 <--
EP 808682	A3	20000301			
EP 808682	B1	20030716			
R: DE, FR, GB					
JP 09312261	A	19971202	JP 1996-126642		19960522 <--
JP 3373357	B2	20030204			
JP 09309713	A	19971202	JP 1996-126643		19960522 <--
JP 3445059	B2	20030908			
JP 09309798	A	19971202	JP 1996-126644		19960522 <--
JP 3426083	B2	20030714			
PRIORITY APPLN. INFO.:			JP 1996-126642	A	19960522 <--
			JP 1996-126643	A	19960522 <--
			JP 1996-126644	A	19960522 <--

PATENT CLASSIFICATION CODES:

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES

```
EP 808682       ICM    B22F009-02
                ICS    B22F001-00; C01B031-02; B01J019-12
                IPCI   B22F0009-02 [ICM,6]; B22F0001-00 [ICS,6];
                       C01B0031-02 [ICS,6]; C01B0031-00 [ICS,6,C*];
                       B01J0019-12 [ICS,6]
                IPCR   B01J0019-08 [I,C*]; B01J0019-08 [I,A];
                       B01J0019-12 [I,C*]; B01J0019-12 [I,A];
                       B22F0001-00 [I,C*]; B22F0001-00 [I,A];
                       B22F0009-02 [I,C*]; B22F0009-02 [I,A];
                       B22F0009-06 [I,C*]; B22F0009-06 [I,A];
                       C01B0031-00 [I,C*]; C01B0031-02 [I,A]
                ECLA   B01J019/08B; B01J019/12B; B01J019/12D;
                       B22F001/00A2B4; B22F009/02; B22F009/06;
                       C01B031/02B
JP 09312261     IPCI   H01L0021-203 [ICM,6]; H01L0021-02 [ICM,6,C*];
                       B01J0019-12 [ICS,6]; H01L0039-24 [ICS,6];
                       B22F0009-02 [ICS,6]
                IPCR   B01J0019-12 [I,C*]; B01J0019-12 [I,A];
                       B22F0009-02 [I,C*]; B22F0009-02 [I,A];
                       C23C0014-46 [I,C*]; C23C0014-46 [I,A];
                       H01L0021-02 [I,C*]; H01L0021-203 [I,A];
                       H01L0039-24 [I,C*]; H01L0039-24 [I,A]
JP 09309713     IPCI   C01B0031-02 [ICM,6]; C01B0031-00 [ICM,6,C*];
                       B01J0019-12 [ICS,6]
                IPCR   C01B0031-00 [I,C*]; C01B0031-02 [I,A];
                       B01J0019-12 [I,C*]; B01J0019-12 [I,A]
JP 09309798     IPCI   C30B0030-00 [ICM,6]; B01J0019-00 [ICS,6];
                       B01J0019-12 [ICS,6]; B22F0001-00 [ICS,6]
                IPCR   B01J0019-00 [I,C*]; B01J0019-00 [I,A];
                       B01J0019-12 [I,C*]; B01J0019-12 [I,A];
                       B22F0001-00 [I,C*]; B22F0001-00 [I,A];
                       C30B0030-00 [I,C*]; C30B0030-00 [I,A]
```

ABSTRACT:
The target material having **distributed** pores is placed on a flat substrate, and is irradiated in vacuum with high-energy beam at an angle to the substrate to promote the target vaporization in pores followed by formation of ultrafine **particles** of nominally 1-10 nm size. The process is suitable for manufacture of ultrafine ***particles*** of metal or semiconductor materials, as well as the manufacture of fullerene **particles** from C films. The ***particle*** size and uniformity can be controlled by the pore texture and the irradiation conditions. The **dispersed** Au ***particles*** with average diameter of 2.4 nm were formed on supporting C film by placing Au-mesh target, followed by irradiation with inclined Ar-ion beam at 3.0 keV, 0.5 mA, and the vacuum of 10-3 Pa to promote formation of the typical Au **particle** in an original mesh pore.

SUPPL. TERM: porous target irradn ultrafine powder pptn; metal powder pptn target beam irradn; gold powder pptn target beam irradn; semiconductor powder pptn target beam irradn; fullerene powder pptn target beam irradn; ion beam irradn target vapor pptn; carbon support metal vaporizing ultrafine powder

INDEX TERM: Composites
(bonded powders; manufacture of ultrafine **particles** by irradiation of porous target heated on substrate by high-energy beam for local vapor precipitation)

INDEX TERM: Vapor deposition process
(irradiation and; manufacture of ultrafine **particles**

by irradiation of porous target heated on substrate by
high-energy beam for local vapor precipitation)

INDEX TERM: **Particle** beams
(irradiation by high-power, for vapor precipitation;
manufacture of
ultrafine **particles** by irradiation of porous
target heated on substrate by high-energy beam for
local vapor precipitation)

INDEX TERM: Electron beams
(irradiation by; manufacture of ultrafine **particles**
by irradiation of porous target heated on substrate by
inclined electron beam for vapor precipitation)

INDEX TERM: Fullerenes
ROLE: IMF (Industrial manufacture); PREP (Preparation)
(manufacture of; manufacture of ultrafine fullerenes by
irradiation of porous target heated on substrate by
high-energy beam for local vapor precipitation)

INDEX TERM: Semiconductor materials
(powders from; manufacture of ultrafine
particles by irradiation of porous target
heated on substrate by high-energy beam for local
vapor precipitation)

INDEX TERM: Powders
(ultrafine, manufacture of precipitated; manufacture of
ultrafine
particles by irradiation of porous target
heated on substrate by high-energy beam for local
vapor precipitation)

INDEX TERM: 7440-44-0, Carbon, processes
ROLE: PEP (Physical, engineering or chemical process);
PROC (Process)
(amorphous films; manufacture of ultrafine
particles by irradiation of **porous**
target heated on **carbon film** by
high-energy ion beam for local vapor precipitation)

INDEX TERM: 7440-37-1, Argon, processes
ROLE: PEP (Physical, engineering or chemical process);
PROC (Process)
(ion beam, irradiation with; manufacture of ultrafine
particles by irradiation of porous target
heated on substrate by high-energy ion beam for
local vapor precipitation)

INDEX TERM: 7440-06-4, **Platinum**, uses 7440-21-3,
Silicon, uses 7440-50-8, Copper, uses 7440-57-5,
Gold, uses
ROLE: TEM (Technical or engineered material use); USES
(Uses)
(powder, manufacture of ultrafine; manufacture of ultrafine
particles by irradiation of **porous**
target heated on **carbon film** by
high-energy ion beam for local vapor precipitation)

L36 ANSWER 10 OF 20 HCAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 2

ACCESSION NUMBER: 1996:214293 HCAPLUS Full-text
DOCUMENT NUMBER: 124:305709
ENTRY DATE: Entered STN: 13 Apr 1996
TITLE: Metal-**dispersed porous**
carbon films as
electrocatalytic sensors
AUTHOR(S): Wang, Joseph; Pamidi, Prasad V. A.; Renschler,

Clifford L.; White, Christine
CORPORATE SOURCE: Department of Chemistry and Biochemistry, New Mexico State University, Las Cruces, NM, USA
SOURCE: Journal of Electroanalytical Chemistry (1996), 404(1), 137-42
CODEN: JECHES
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
CLASSIFICATION: 79-2 (Inorganic Analytical Chemistry)
Section cross-reference(s): 9, 64, 67, 72, 80

ABSTRACT:
The attractive features of ultrathin **porous carbon** ***films*** were coupled with the efficient catalytic action of ***dispersed*** metal **particles**. In particular, loading of these submicrometer foams with ruthenium or **platinum** centers offers a dramatic increase in the electron transfer rates of important redox systems, such as NADH, uric acid, ascorbic acid, acetaminophen, hydrazine or hydrogen peroxide. Characterization of the electrocatalytic behavior (with respect to the pH, scan rate or metal loading) and the attractive low-potential anal. (sensing) performance are reported. SEM sheds useful insights into the **distribution** of the metals within the porous electrode matrix.

SUPPL. TERM: metal **dispersed porous carbon film** electrocatalyst; sensor metal **porous carbon film** electrocatalyst

INDEX TERM: Sensors
(electrocatalytic; metal-**dispersed porous carbon films** as electrocatalytic sensors)

INDEX TERM: **Films**
(metal-**dispersed porous carbon films** as electrocatalytic sensors)

INDEX TERM: Catalysts and Catalysis
(electrochem., metal-**dispersed porous carbon films** as electrocatalytic sensors)

INDEX TERM: 7440-06-4, **Platinum**, analysis 7440-18-8, Ruthenium, analysis
ROLE: ARU (Analytical role, unclassified); CAT (Catalyst use); DEV (Device component use); ANST (Analytical study); USES (Uses)
(metal-**dispersed porous carbon films** as electrocatalytic sensors)

INDEX TERM: 7440-44-0, Carbon, analysis
ROLE: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(metal-**dispersed porous carbon films** as electrocatalytic sensors)

INDEX TERM: 50-81-7, Ascorbic acid, analysis 58-68-4, NADH 69-93-2, Uric acid, analysis 103-90-2, Acetaminophen 302-01-2, Hydrazine, analysis 7722-84-1, Hydrogen peroxide, analysis
ROLE: ANT (Analyte); ANST (Analytical study)
(redox compound determination by electrocatalytic sensors

with metal-**dispersed porous**
carbon films)

L36 ANSWER 11 OF 20 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1992:155139 HCAPLUS Full-text
DOCUMENT NUMBER: 116:155139
ENTRY DATE: Entered STN: 17 Apr 1992
TITLE: Imaging of lubricating oil insolubles by electron microscopy
AUTHOR(S): Shuff, P. J.; Clarke, L. J.
CORPORATE SOURCE: Thornton Res. Cent., Shell Res. Ltd., Chester, CH1 3SH, UK
SOURCE: Tribology International (**1991**), 24(6), 381-7
CODEN: TRBIBK; ISSN: 0301-679X
DOCUMENT TYPE: Journal
LANGUAGE: English
CLASSIFICATION: 51-8 (Fossil Fuels, Derivatives, and Related Products)
Section cross-reference(s): 73

ABSTRACT:
A range of techniques which permits the imaging, spatial ***distribution*** and, in some cases, the **particle** site ***distribution*** of lubricating oil insols. by electron microscopy is described and illustrated. Techniques and results discussed are: (1) oil removal/**carbon film**, **holey carbon** ***film*** filtering, freeze fracture replication), (2) capillary de-oiling/critical point drying, (3) **particle** siting of used oil insols., and (4) oil retention (cryoTEM, cryoultramicrotomy).

SUPPL. TERM: SEM TEM lubricating oil insol; imaging electron microscopy lubricating oil insol
INDEX TERM: Paraffin waxes and Hydrocarbon waxes, miscellaneous
ROLE: MSC (Miscellaneous)
(electron microscopy of, imaging of lubricating oil insols. in relation to)
INDEX TERM: Lubricating greases
(imaging of, by electron microscopy)
INDEX TERM: Soot
(in used lubricating oil, imaging of, by electron microscopy)
INDEX TERM: Lubricating oils
(insols. of, imaging of, by electron microscopy)
INDEX TERM: Microscopy, electron
(of lubricating oil insols.)
INDEX TERM: Lubricating oil additives
(detergents, imaging of, by electron microscopy)
INDEX TERM: Microscopy, electron
(scanning, of lubricating oil insols.)
INDEX TERM: Lubricating grease additives
(soaps, imaging of, by electron microscopy)
INDEX TERM: Microscopy, electron
(transmission, of lubricating oil insols.)

L36 ANSWER 12 OF 20 COMPENDEX COPYRIGHT 2008 EEI on STN
ACCESSION NUMBER: 1992(9):120005 COMPENDEX Full-text
DOCUMENT NUMBER: 9209115835
TITLE: Structural study of colloidal oxides by high resolution electron microscopy.
AUTHOR: Kirkland, A.I. (Univ of Cambridge, Engl);

Jefferson, D.A.; Tang, D.

MEETING TITLE: Proceedings of the Institute of Physics Electron Microscopy and Analysis Group Conference.
MEETING ORGANIZER: The Royal Microscopial Soc
MEETING LOCATION: Bristol, Engl
MEETING DATE: 10 Sep 1991-13 Sep 1991
SOURCE: Institute of Physics Conference Series v 119.Publ by IOP Publishing Ltd, Distribution Department, Bristol, Engl.p 39-42
SOURCE: Institute of Physics Conference Series v 119.Publ by IOP Publishing Ltd, Distribution Department, Bristol, Engl.p 39-42
CODEN: IPCSEP ISSN: 0951-3248
ISBN: 0-85498-408-9
PUBLICATION YEAR: **1991**
MEETING NUMBER: 16592
DOCUMENT TYPE: Conference Article
TREATMENT CODE: Experimental
LANGUAGE: English

ABSTRACT: The morphology and surface structure exhibited in colloidal titanium and cerium oxide **particles** has been examined by High Resolution Electron Microscopy.Samples of concentrated sols of cerium and titanium oxide were prepared for electron microscopy by extensive dilution with doubly distilled water followed by ultrasonic **dispersion** and deposition onto **holey carbon films**.Refs.

CLASSIFICATION CODE: 741 Optics & Optical Devices; 804 Chemical Products; 542 Light Metals & Alloys; 931 Applied Physics; 549 Nonferrous Metals & Alloys
CONTROLLED TERM: *MICROSCOPES, ELECTRON:Applications; TITANIUM COMPOUNDS; OXIDES; CERIUM COMPOUNDS; COLLOIDS; SURFACES:Microstructure
SUPPLEMENTARY TERM: HIGH RESOLUTION ELECTRON MICROSCOPY; SURFACE MORPHOLOGY

L36 ANSWER 13 OF 20 JAPIO (C) 2008 JPO on STN
ACCESSION NUMBER: 1990-034703 JAPIO Full-text
TITLE: MANUFACTURE OF AROMATIZED POROUS METAL SINTERED BODY
INVENTOR: NISHIMURA MINORU; KAMITAKI NAOHISA
PATENT ASSIGNEE(S): NISHIMURA MINORU
KAMITAKI NAOHISA
PATENT INFORMATION:

PATENT NO	KIND	DATE	ERA	MAIN IPC
JP 02034703	A	**19900205**	Heisei	B22F003-26

APPLICATION INFORMATION
STN FORMAT: JP 1988-183004 19880722
ORIGINAL: JP63183004 Showa
PRIORITY APPLN. INFO.: JP 1988-183004 19880722
SOURCE: PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 1990
INT. PATENT CLASSIF.:
MAIN: B22F003-26
SECONDARY: B22F003-24

ABSTRACT:
PURPOSE: To manufacture an aromatized porous metal sintered body having excellent outward appearance and aromatizing durability by executing steam treatment or anodic oxidizing treatment to a porous sintered body of metal powder **particles** and impregnating aromatized liquid in this after forming

surface film. CONSTITUTION: The powder **particles** containing metal or alloy powder as main component is sintered after compressing and forming to obtain the porous sintered body. The steam treatment or anodic oxidizing treatment is executed to this sintered body to form the surface film. The above steam treatment is desirable to bring superheated steam into contact with the sintered body and treat for 0.5-1hr. Further, the anodic oxidizing treatment is desirable to execute by using the sintered body as the anode and graphite as the cathode in the water solution of <10kmol/m<SP>3</SP> NaOH at 70-90°C. By this surface **film**, **voids** among the **particles** in the sintered body are made small at least near the surface. After that, the aromatized liquid is impregnated in the above porous sintered body. By this method, **dispersion** of the impregnated aromatized-liquid is restrained to the min. and held to long time and also the outward appearance caused by the above surface film is improved. COPYRIGHT: (C)1990,JPO&Japio

L36 ANSWER 14 OF 20 JAPIO (C) 2008 JPO on STN
ACCESSION NUMBER: 1987-098259 JAPIO Full-text
TITLE: KIT FOR MEASURING IMMUNE ACTIVITY MATERIAL
INVENTOR: KAWASAKI TAKASHI
PATENT ASSIGNEE(S): NITTO ELECTRIC IND CO LTD
PATENT INFORMATION:

PATENT NO	KIND	DATE	ERA	MAIN IPC
JP 62098259	A	**19870507**	Showa	G01N033-543

APPLICATION INFORMATION
STN FORMAT: JP 1985-239690 19851025
ORIGINAL: JP60239690 Showa
PRIORITY APPLN. INFO.: JP 1985-239690 19851025
SOURCE: PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 1987
INT. PATENT CLASSIF.:
MAIN: G01N033-543
SECONDARY: C12Q001-00
ABSTRACT:
PURPOSE: To measure an immune active material with good accuracy by using a kit consisting of a **dispersion** of high-molecular **particles** deposited with an antigen or antibody specific to a material to be measured, porous film, enzyme labeled antigen or antibody specific to the material to be measured, substrate of enzyme and buffer solution
CONSTITUTION: This kit for measuring the immune active material is constituted of A): the **dispersion** of the high-molecular polymer **particles** deposited with the antigen or antibody specific to the material to be measured, B): a filter having the **porous film**, C): the enzyme labeled antigen or antibody specific to the material to be measured or the enzyme labeled material to be measured, D): the substrate of reaction (coloring reaction) while the enzyme of C) can catalyze, and E): the buffer solution to be used for cleaning in the stage of separation by the porous film. The material to be measured is measured by observing the coloration by enzyme reaction if such kit is used; therefore, the measurement is easily made with good accuracy. COPYRIGHT: (C)1987,JPO&Japio

L36 ANSWER 15 OF 20 INSPEC (C) 2008 IET on STN
ACCESSION NUMBER: 1987:2916683 INSPEC Full-text
DOCUMENT NUMBER: A1987-086155
TITLE: Intermetallic phases formed during DC-casting of an Al-0.25 wt pct Fe-0.13 wt pct Si alloy

AUTHOR: Skjerpe, P. (Dept of Phys., Oslo Univ., Norway)
SOURCE: Metallurgical Transactions A (Physical Metallurgy and Materials Science) (Feb. 1987), vol.18A, no.2, p. 189-200, 35 refs.
CODEN: MTTABN, ISSN: 0360-2133
Price: 0360-2133/87/$00.75
DOCUMENT TYPE: Journal
TREATMENT CODE: Experimental
COUNTRY: United States
LANGUAGE: English

ABSTRACT: The Al-Fe and Al-Fe-Si **particles** formed during DC-casting of an Al-0.25 wt pct Fe-0.13 wt pct Si alloy have been examined. The **particles** were analyzed by transmission electron microscopy (TEM) and energy **dispersive** spectroscopy of X-rays (EDS). Crystal faults were studied by high resolution electron microscopy (HREM). Samples for electron microscopy were taken at various positions in the ingot, i.e. with different local cooling rates during solidification. At a cooling rate of 6 to 8 K/s the dominating phases were BCC α-AlFeSi and BCT AlmFe. The space group of BCC α-AlFeSi was verified to be Im3. Superstructure reflections from AlmFe were caused by faults on {110}-planes. At a cooling rate of 1 K/s the dominating phases were monoclinic Al3Fe and the incommensurate structure AlxFe. In Al3Fe, stacking faults on {001} were frequently observed. The structure of AlxFe is probably related to Al6Fe. Some amounts of other phases were detected. For EDS-analysis, extracted **particles** mounted on **holey carbon films** were examined

CLASSIFICATION CODE: A6155H Crystal structure of specific alloys; A6170P Stacking faults, stacking fault tetrahedra and other planar or extended defects; A6470 Phase equilibria, phase transitions, and critical points; A6470D Solid-liquid transitions; A8130B Phase diagrams of metals and alloys; A8130F Solidification
CONTROLLED TERM: aluminium alloys; casting; crystal atomic structure of alloys; iron alloys; phase diagrams; phase equilibrium; silicon alloys; solidification; stacking faults; transmission electron microscope examination of materials; X-ray chemical analysis
SUPPLEMENTARY TERM: direct chill casting; superstructure reflections; intermetallic phases; transmission electron microscopy; energy dispersive spectroscopy of X-rays; high resolution electron microscopy; local cooling rates; solidification; space group; dominating phases; monoclinic Al3Fe; incommensurate structure; stacking faults; Al-Fe-Si particles
CHEMICAL INDEXING: AlFeSi ss, Al ss, Fe ss, Si ss
ELEMENT TERMS: Al*Fe; Al sy 2; sy 2; Fe sy 2; Al3Fe; Al cp; cp; Fe cp; Fe*Si; Si sy 2; Fe-Si; FeSi; Si cp; Al; Fe; Si; Al-Fe; Al*Fe*Si; Al sy 3; sy 3; Fe sy 3; Si sy 3; Al-Fe-Si; AlFeSi; AlmFe; AlxFe; Al6Fe

L36 ANSWER 16 OF 20 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1986:43396 HCAPLUS Full-text
DOCUMENT NUMBER: 104:43396
ORIGINAL REFERENCE NO.: 104:6927a,6930a
ENTRY DATE: Entered STN: 08 Feb 1986
TITLE: The mechanism of the deposition of pyrolytic carbons
AUTHOR(S): Kaae, J. L.
CORPORATE SOURCE: G. A. Technol., Inc., San Diego, CA, 92138, USA
SOURCE: Carbon (1985), 23(6), 665-73

CODEN: CRBNAH; ISSN: 0008-6223
DOCUMENT TYPE: Journal
LANGUAGE: English
CLASSIFICATION: 75-2 (Crystallography and Liquid Crystals)
ABSTRACT:
The changes were studied in crystallite-preferred orientation, ***distribution*** of 0.1-1.0-μm diameter pores, d., growth feature shape, and crystallite arrangement that occur with changes in the conditions of pyrolytic C deposition in a fluidized bed of ***particles.*** Based on these changes a deposition mechanism is proposed wherein changes in the crystallite-preferred orientation and the pore **distribution** are controlled by the relative concns. of 2 depositing components, which are solid **particles** and mol. species. Changes in the crystallite arrangement, and thereby the d., are controlled by changes in the reaction probability of the planar hydrocarbon mols. with the C surface.

SUPPL. TERM: deposition mechanism pyrolytic carbon; microstructure pyrolytic carbon deposition
INDEX TERM: **Pore**
(**distribution** of, in **carbon** pyrolytic **films**)
INDEX TERM: Crystallites
(orientation and size of, in pyrolytic carbon films)
INDEX TERM: 7440-44-0, uses and miscellaneous
ROLE: USES (Uses)
(deposition of pyrolytic, microstructure and pore **distribution** in)

L36 ANSWER 17 OF 20 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1984:212373 HCAPLUS Full-text
DOCUMENT NUMBER: 100:212373
ORIGINAL REFERENCE NO.: 100:32245a,32248a
ENTRY DATE: Entered STN: 23 Jun 1984
TITLE: Carbon sorbent for separating low- and high-molecular-weight substances
INVENTOR(S): Solodovnik, V. D.; Solodkaya, T. I.; Davydov, A. B.; Malozemova, L. N.; Vysokosov, A. N.
PATENT ASSIGNEE(S): All-Union Scientific-Research Institute of Medical Technology, USSR
SOURCE: U.S.S.R. From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1984, (12), 79.
CODEN: URXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Russian
INT. PATENT CLASSIF.: C01B031-16; B01J020-20
CLASSIFICATION: 48-1 (Unit Operations and Processes)
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 1082758	A1	19840330	SU 1977-2561311 <--	19771228

PRIORITY APPLN. INFO.: SU 1977-2561311 197712

<--

PATENT CLASSIFICATION CODES:

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
SU 1082758	IC	C01B031-16; B01J020-20
	IPCI	C01B0031-16; C01B0031-00 [C*]; B01J0020-20
	IPCR	B01J0020-20 [I,C*]; B01J0020-20 [I,A]; C01B0031-00 [I,C*]; C01B0031-16 [I,A]

ABSTRACT:
A C sorbent for separating low- and high-mol.weight substances is prepared by ***dispersing*** it in a solution of film-forming material in the presence of a solvent, removing the C **particles** with the layer of film-forming material applied to them, removing the remaining solvent from the film-forming material and then drying the product. The degree of separation of low- and high-mol.-weight substances is increased and the absorption kinetics of low-mol.-weight compds. improved by decreasing the degree of filling of the **porous** structure of the C with the **film**-forming material, by first impregnating the ***particles*** of activated C with a liquid mixed with the solvent, and then removing the excess liquid CHCl3 may be used as this liquid, poly(vinyl alc.) as the film-forming material, and H2O as the solvent for the latter. Acetylcellulose may be used as film-forming material, and COMe2 as the solvent, also.

SUPPL. TERM: low mol wt substance sepn; high mol wt substance sepn; carbon sorbent sepn
INDEX TERM: 7440-44-0, uses and miscellaneous
ROLE: USES (Uses)
(active, adsorbents, coating of)
INDEX TERM: 67-64-1, uses and miscellaneous
ROLE: USES (Uses)
(as solvent, in coating of active carbon)
INDEX TERM: 9002-89-5 9004-35-7
ROLE: USES (Uses)
(coating with, of active carbon)
INDEX TERM: 67-66-3, uses and miscellaneous 7732-18-5, uses and miscellaneous
ROLE: USES (Uses)
(impregnating with, of active carbon before coating)

L36 ANSWER 18 OF 20 COMPENDEX COPYRIGHT 2008 EEI on STN
ACCESSION NUMBER: 1986(12):205055 COMPENDEX Full-text
TITLE: FILM GROWTH ON ALUMINUM ALLOYS DURING AC ANODIZING IN SULPHURIC AND OXALIC ACID SOLUTIONS.
AUTHOR: Zahavi, J. (Technion-Israel Inst of Technology, Haifa, Isr); Kerbel, H.; Korotkina, O.
MEETING TITLE: 71st.AES Annual Technical Conference Proceedings.
MEETING ORGANIZER: American Electroplaters' Soc Inc, Winter Park, FL, USA
MEETING LOCATION: New York, NY, USA
MEETING DATE: 16 Jul 1984-19 Jul 1984
SOURCE: Annual Technical Conference - American Electroplaters' Society 71st.Publ by American Electroplaters' Soc Inc, Winter Park, FL, USA Pap G-3, 24p
SOURCE: Annual Technical Conference - American

Electroplaters' Society 71st.Publ by American Electroplaters' Soc Inc, Winter Park, FL, USA
Pap G-3, 24p
CODEN: ATCSDW ISSN: 0270-2622

PUBLICATION YEAR: **1984**
MEETING NUMBER: 06051
DOCUMENT TYPE: Conference Article
LANGUAGE: English

ABSTRACT: Studies are being made of A-C anodizing processes on aluminum commercial alloys in sulfuric and oxalic acids at constant AC voltages.Special attention is given to the effect of intermetallic second phase **particles dispersed** in these alloys on AC film growth and properties. **Porous** A-C **film** thickness increased with anodized time, electrolyte temperature and concentration and anodizing voltage on all the aluminum alloys used in this work.Intermetallic compounds **dispersed** in the aluminum alloy matrix incorporated into the anodic films during their formation and thus affected film composition and properties.(Edited author abstract) 13 refs. CLASSIFICATION CODE: 541 Aluminum & Alloys; 539 Metals Corrosion & Protection; 423 General Materials Properties & Testing; 944 Moisture, Pressure & Temperature, & Radiation Measuring Instruments; 804 Chemical Products; 802 Chemical Apparatus & Plants

CONTROLLED TERM: *ALUMINUM AND ALLOYS:Anodic Oxidation; PROTECTIVE COATINGS:Thickness Measurement; FILMS:Preparation; SULFURIC ACID:Chemical Reactions; ACIDS:Organic

SUPPLEMENTARY TERM: SCANNING ELECTRON MICROSCOPE; TRANSMISSION ELECTRON MICROSCOPE; ELECTRON PROBE MICROANALYZER; ALTERNATING CURRENT ANODIZATION; OXALIC ACID; BARRIER LAYER

L36 ANSWER 19 OF 20 HCAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 3

ACCESSION NUMBER: 1982:481673 HCAPLUS Full-text
DOCUMENT NUMBER: 97:81673
ORIGINAL REFERENCE NO.: 97:13441a,13444a
ENTRY DATE: Entered STN: 12 May 1984
TITLE: A.c. anodizing processes of aluminum alloys
AUTHOR(S): Zahavi, Joseph; Kerbel, H.; Korotkina, O.
CORPORATE SOURCE: Israel Inst. Met., Technion, Haifa, Israel
SOURCE: Journal of the Electrochemical Society (**1982**), 129(7), 1572-9
CODEN: JESOAN; ISSN: 0013-4651
DOCUMENT TYPE: Journal
LANGUAGE: English
CLASSIFICATION: 72-7 (Electrochemistry)

ABSTRACT:
Studies were made of thick a.c. anodic films on com. purity Al and Al-Cu alloys in H_2SO_4 and oxalic acid solns., with particular examination of the constituents in these alloys. Film structure, topog. and composition were characterized through electron microscopy and electron microprobe anal. Fe-rich 2nd-phase **particles** and Cu-rich, Fe, and Mn ***dispersed*** intermetallics present in the AA 1100-H14 [11146-12-6] and in AA 2024 T 3 [12616-84-1], resp., were incorporated and retained in the a.c. films during their growth. The embedment of these 0.5-10 μm intermetallic constituents did not substantially affect a.c. thick **porous film** growth, film/electrolyte and film/metal interfaces, film pore and barrier layer structures, or uniformity of film thickness. The mechanisms of incorporation of nonreactive Fe-rich 2nd-phase **particles** and reactive Cu-rich intermetallics into the growing film are discussed.

SUPPL. TERM: intermetallic incorporation anodized aluminum alloy; alternating current anodization aluminum alloy; oxalic acid anodization aluminum alloy; sulfuric acid anodization aluminum alloy

INDEX TERM: Intermetallic compounds
ROLE: PROC (Process)
(incorporation of, in anodic coatings, on aluminum alloys from a.c. anodization in oxalic and sulfuric acids)

INDEX TERM: Anodization
(of aluminum alloy, in oxalic acid and sulfuric acid, using a.c.)

INDEX TERM: Electric current
(alternating, in anodization in aluminum alloys in oxalic and sulfuric acids)

INDEX TERM: Coating materials
(anodic, on aluminum alloys, **dispersed** intermetallics in, from a.c. anodization in sulfuric and oxalic acids)

INDEX TERM: 144-62-7, uses and miscellaneous
ROLE: USES (Uses)
(anodization of aluminum alloys in solns. containing, using a.c., **dispersed** intermetallics in anodic films in relation to)

INDEX TERM: 7664-93-9, uses and miscellaneous
ROLE: USES (Uses)
(anodization of aluminum alloys in solns. of, using a.c., **dispersed** intermetallics in anodic films in relation to)

INDEX TERM: 11146-12-6 12616-84-1
ROLE: PRP (Properties)
(coatings on, anodic, incorporation of **dispersed** intermetallics in, from a.c. anodization in oxalic acid and sulfuric acid solns.)

L36 ANSWER 20 OF 20 JAPIO (C) 2008 JPO on STN
ACCESSION NUMBER: 2004-335459 JAPIO Full-text
TITLE: METAL CARRYING **POROUS CARBON FILM**, ELECTRODE FOR FUEL CELL, AND FUEL CELL USING THE SAME
INVENTOR: OYA NOBUO; FUJII YUICHI; MATSUO MAKOTO; TAKAGI JUN
PATENT ASSIGNEE(S): UBE IND LTD
PATENT INFORMATION:

PATENT NO	KIND	DATE	ERA	MAIN IPC
JP 2004335459	A	20041125	Heisei	H01M004-86

APPLICATION INFORMATION
STN FORMAT: JP 2004-121247 20040416
ORIGINAL: JP2004121247 Heisei
PRIORITY APPLN. INFO.: JP 2003-113978 20030418
SOURCE: PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 2004
INT. PATENT CLASSIF.:
MAIN: H01M004-86
SECONDARY: H01M004-88; H01M004-92; H01M008-10

ADDITIONAL: C01B031-02

ABSTRACT:

PROBLEM TO BE SOLVED: To provide a metal carrying **porous carbon film** made to uniformly carry metal fine **particles** of controlled **particle** sizes, having a carrier structure capable of effectively utilizing a metallic catalyst, manufactured by a simple manufacturing process, and to provide an electrode for a fuel cell, and the fuel cell using the same.

SOLUTION: In the metal carrying **porous carbon film**, metal **particles** having average **particle** diameters of 0.7-20 nm, especially 1-10 nm, are **dispersed** and carried on a surface wall having fine pores. The electrode for a fuel cell using the metal carrying **porous carbon film** and an membrane-electrode junction made by jointing the electrode for a fuel cell on both sides of a polymer electrolyte membrane are obtained.

=>